

# INTRODUCING POWERFUL TOOLS FOR QUALITATIVE RESEARCH

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**GREENSBORO**

Department of Educational  
Research Methodology

# (A FEW) QUALITATIVE DIGITAL TOOLS

- Introduction
- Data Collection - Digital Recording
  - Digital Recorders & LiveScribe Pens
- Data Collection – Transcription
  - Dragon, Express Scribe, Foot Pedal
- Data Collection – Survey Tools
  - SurveyMonkey & Qualtrics
- Data Analysis - CAQDAS
  - RQDA & NVIVO
- Conclusion
  - Other Tips & Tools



# QUALITATIVE TOOLS



# WHY DO WE NEED DIFFERENT DATA COLLECTION METHODS?

Because data collection isn't cut and dry. (Simons 1999)

[Watch the Video](#)

Data collection methods may be closely associated with particular paradigms, but they are not necessarily limited by those paradigms.



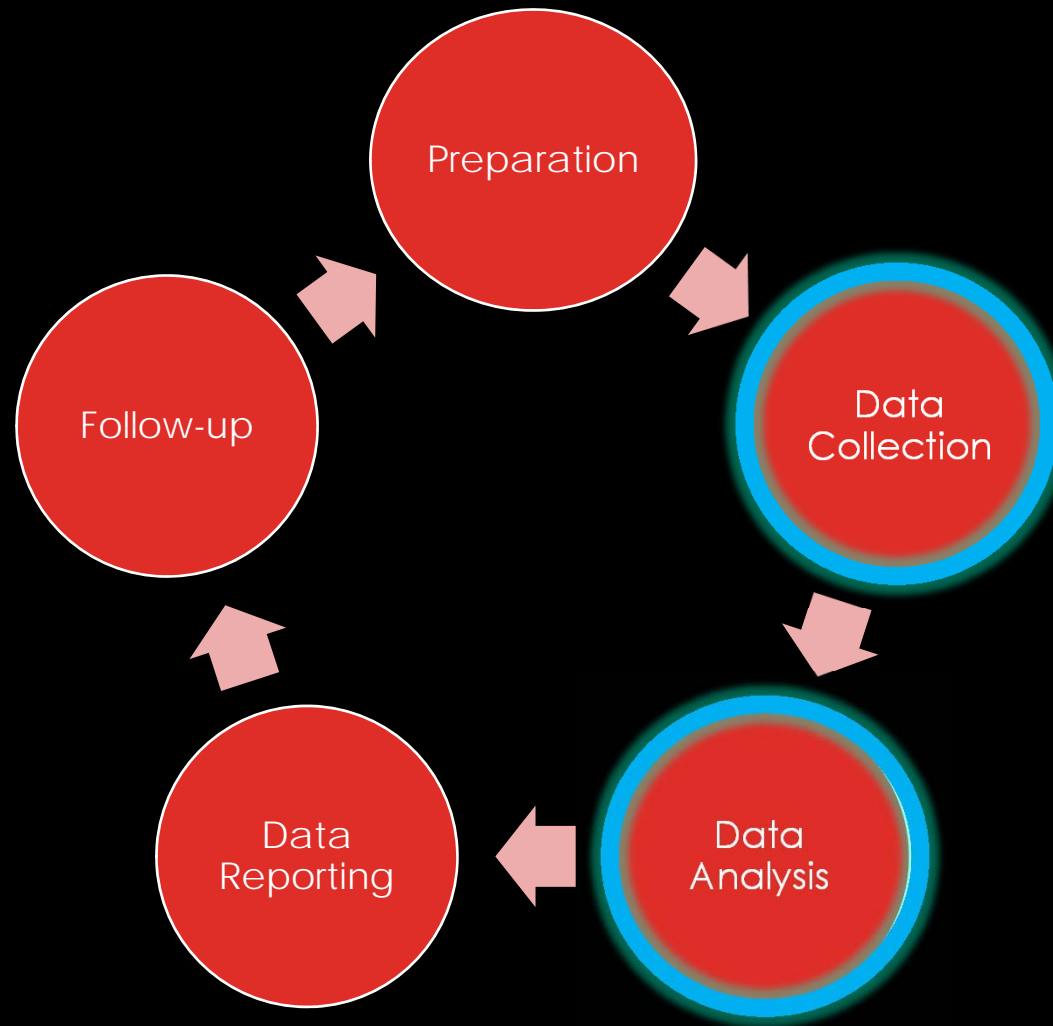


# WHY IS THIS PRESENTATION IMPORTANT?

- Digital tools help take the place of what we used to do manually
  - Highlighters
  - Even if you have simple categories in analysis, it can get messy
    - Positive Opinion
    - Negative Opinion
      - Subcategories show up



# CYCLE OF RESEARCH



# TWO EVENTS IN RESEARCH

Event	Process (examples)	Relevant Tools
1. Data Collection	<ul style="list-style-type: none"> <li>Designing of protocols &amp; instruments                             <ul style="list-style-type: none"> <li>Debriefing</li> </ul> </li> <li>Artifact collection (audio, video, portfolios)</li> <li>Interviewing</li> <li>Verifying</li> </ul>	<b>Digital Audio Recorders:</b> Digital recorders Livescribe Pens <b>Transcription tools:</b> Dragon Express Scribe Foot Pedal <b>Survey tools:</b> Survey Monkey Qualtrics
2. Data Analysis	<ul style="list-style-type: none"> <li>Organizing</li> <li>Thematic Coding</li> <li>Interpreting</li> <li>Triangulating</li> <li>Rater Reliability</li> </ul>	<b>Survey tools:</b> SurveyMonkey Qualtrics <b>CAQDAS:</b> RQDA NVIVO



# DATA COLLECTION – DIGITAL RECORDING

- We want to record audio for later playback and analysis
  - Digital Audio Recorders
  - LiveScribe Pens





# DIGITAL RECORDERS



- Low cost appliance \$30-80
- Intuitive and clearly marked features
- Practical and functional
  - Media controls (record/pause, play/stop, volume, erase)
  - Display with time/date stamp, duration, battery life, etc.
  - External speaker
- Good sound quality – ideal for later playback
- Also.. “free” recorders on your smartphone, laptops, tablets



# DIGITAL RECORDERS

- Countless options to choose from:
  - By feature:
    - Wireless remote
    - Noise cancellation
    - Silent skip
    - Expandable memory
    - Bookmarking
    - Batteries (rechargeable or dispensable)
- Cost:
  - Range between \$30-\$180 (average \$40-\$80)
  - More features = more \$\$



# LIVESCRIBE PENS



# LIVESCRIBE PENS



\$110+

- A “smart pen” that captures handwritten gestures while recording audio
- Uses “dot positioning system” to capture pen movements, link audio, and launch actions
- At a minimum, an audio recorder with only record/stop functions (without dot paper)



# LIVESCRIIBE PENS



- Maximize this device by using the “special dot paper”
  - Navigate pen menu
  - Execute actions
    - Hard-coded (record, pause, play, skip, calculator)
    - Write the function (email)
  - Capture notes digitally
  - Synchronize notes & audio
    - Interactive notes





# LIVESCRIBE PENS – FEATURES & CAPABILITIES

- Wi-Fi
  - Synchronize audio/notes from pen with PCs, tablets, smartphones over Wi-Fi
  - Send linked audio/notes via email, or publish to Google Docs, OneNote, Facebook directly from your pen
  - Apps (dictionary, translator)
- Livescribe Player allows to **SEARCH** written notes (legibility?)
- Sound stickers (sound “hot-spots” on regular paper allows for playback control)



# THINGS TO CONSIDER

	Digital Recorders	Livescribe Pen
# Digital Artifacts	1 (Audio)	3 (Audio, Digital Notes, synch. audio/ notes)
Sound Quality	48, 128, & 192 kbps	16, 28, & 40 kbps
Memory Size	2GB (expandable 32GB)	2-8 GB (non-expandable)
Wi-Fi	No	Yes
Ease of use	Out of the box	Requires practice
Cost	\$40-80 + Batteries	>\$110 + Ink, dot paper (can also print w/ compatible printer)
Recording environment	Virtually anywhere	Speaker proximity, relatively quiet
Limitations	Only audio, less features	Best with special paper, Notes (enough light for camera, speed, legibility- Search feature)



# IT ALL DEPENDS ON YOUR PURPOSE

- 3 devices on Amazon's top 10 best sellers..



\$28.00



\$12.00



\$128.00



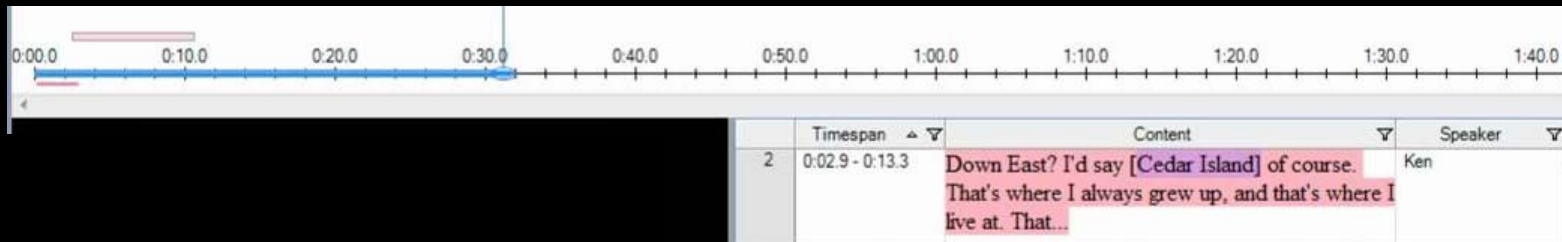
# DATA COLLECTION - TRANSCRIPTION

- Now that you have your data in audio format, you need to convert it into a format that you can analyze
- 3 ways:
  - Code the audio file (NVIVO 10 - \$\$)
  - Transcribe then code:
    - Automatic transcription (Dragon - \$100+)
    - Manual transcription (ExpressScribe - \$20, Foot Pedal - \$50)



# DATA COLLECTION - TRANSCRIPTION

- NVIVO 10: code directly on audio timeline



- Dragon NaturallySpeaking (\$100+): Auto-transcription
  - Speech recognition software
  - Train the software (time consuming)
    - If you are the primary speaker..great!
    - If you have a diverse population..may not pick up accents





# DATA COLLECTION - TRANSCRIPTION

- Manual transcription: Express Scribe
  - Playback speed control
  - Create auto-correct shortcuts
  - Works with play/pause keys on your keyboard
  - Optimized with a foot pedal
- Foot pedal:
  - Control audio while typing
  - Assign shortcuts to each pedal (i.e., L: Rewind, C: Play, R: Forward)



# ACTIVITY 1:

# LIVESCRIBE PENS








# SURVEY ANALYSIS TOOLS

-  SurveyMonkey™
  - Free, but limitations apply without purchasing more inclusive packages.
-  qualtrics®
  - Free trial available, but majority of functionality comes through paid packages.




# SURVEY MONKEY






(US) <https://www.surveymonkey.com>     [survey monkey](#)

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## Create Surveys. Get Answers.



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Just the Basics

[Customer Satisfaction](#) [Education](#) [Events](#) [Market Research](#) [Human Resources](#)

# SURVEYMONKEY PRICING (1/2)

Package	Price/ Month	Price/ Year	Features	Limitations
Basic	Free	Free	<ul style="list-style-type: none"><li>• Pre-written questions &amp; templates</li><li>• View &amp; share results</li><li>• Email support</li></ul>	Only 10 questions and 100 responses allowed per survey
Select	\$17	\$204	<ul style="list-style-type: none"><li>• Unlimited questions</li><li>• Unlimited respondents</li><li>• Question &amp; Page Skip Logic</li><li>• Advanced question types</li><li>• Filter and cross-tabulate data</li><li>• Export results</li><li>• Email support</li></ul>	No SPSS downloads available



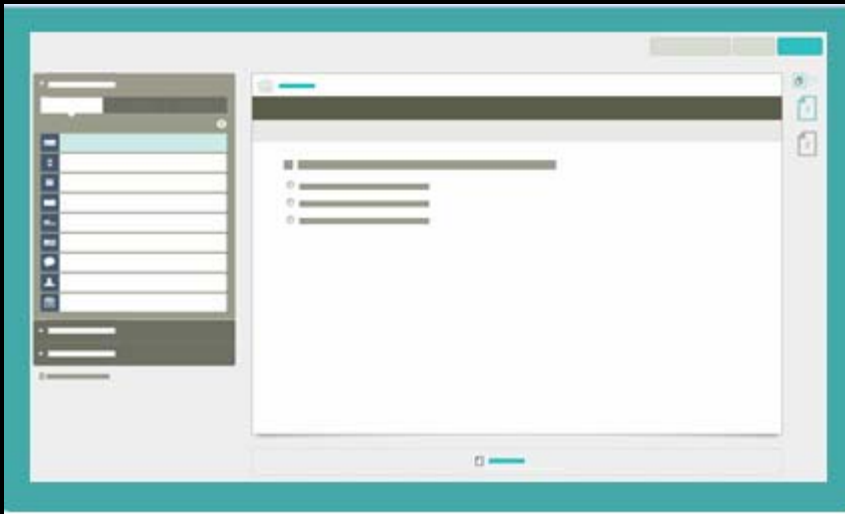
# SURVEYMONKEY PRICING (2/2)

Package	Price/ Month	Price/ Year	Features	Limitations
Gold	\$25	\$300	<ul style="list-style-type: none"><li>• Custom colors and logos</li><li>• A/B testing</li><li>• Question &amp; page randomization</li><li>• More analyses available</li><li>• SPSS downloads/export</li><li>• 24/7 expedited email support</li></ul>	Password protection of survey links is limited and may not be suitable for some research purposes
Platinum	\$65	\$780	<ul style="list-style-type: none"><li>• Custom research.net URL</li><li>• Remove SurveyMonkey footer</li><li>• HIPAA-compliant features</li><li>• Password protected surveys</li><li>• IP blocking</li><li>• Dedicated phone support</li></ul>	None

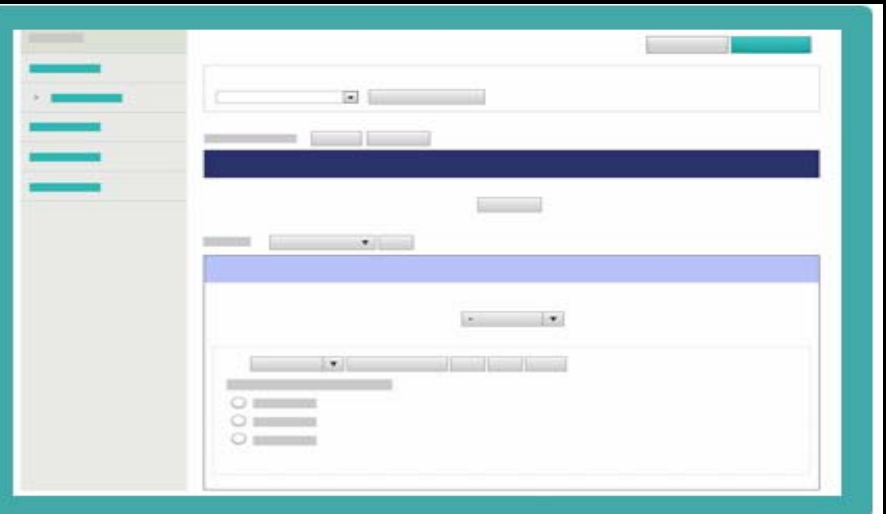
# SURVEY MONKEY: WHAT'S NEW?

- SurveyMonkey now allows certain users to have access to a beta version of “New Design”, which is a new layout for designing surveys.

New Design



Classic Design



# SURVEYMONKEY API

- API = Application Programming Interface

The screenshot displays the SurveyMonkey API interface. At the top, the SurveyMonkey logo is on the left, and an 'Upgrade' button is on the right. Below the logo, navigation links for 'Home', 'My Surveys', 'Survey Services', and 'Plans & Pricing' are visible, along with a '+ Create Survey' button. The main content area is titled 'Experimental Survey' and features a sidebar on the left with options: 'Edit Survey', 'Survey Options', 'Question Bank' (with a help icon), 'Print Survey', 'Restore Questions', and 'Page Randomization'. The main panel is titled 'Edit Survey' and includes buttons for 'Design Survey', 'Collect Responses', 'Analyze Results', 'Preview Survey', and 'Send Survey'. A theme selection box contains a dropdown menu set to 'Aqua' and a 'Create Custom Theme' button. Below this, a 'TITLE & LOGO' section has 'Edit Title' and '+ Add Logo' buttons. A dark blue banner at the bottom of the main panel displays the text 'Experimental Survey'.

SurveyMonkey®

Upgrade

Home My Surveys Survey Services Plans & Pricing + Create Survey

Experimental Survey

Design Survey Collect Responses Analyze Results

Edit Survey

Preview Survey Send Survey »

To change the look of your survey, select a theme below.

Aqua Create Custom Theme

TITLE & LOGO Edit Title + Add Logo

Experimental Survey

# SURVEYMONKEY

- Thematic analysis, word clouds, and summary statistics available in GOLD and PLATINUM.

Q1

Export ▾

### What did you perceive as strengths of the program as a student?

Answered: 2   Skipped: 0

● Responses (2)

▲ Text Analysis

🔍 My Categories

PRO FEATURE

Use text analysis to search and categorize responses; see frequently-used words and phrases. To use Text Analysis, upgrade to a GOLD or PLATINUM plan.

Upgrade

[Learn more »](#)

Categorize as... ▾

Filter by Category ▾

🔍

?

Showing 2 responses

I don't know if necessarily any one thing was the strongest thing in the program, I feel like it was a really good balance between the group sessions and the mentoring and occasional check-ins during the week, um from your mentor. Like I wouldn't say that there was one specific strength. I think all the way around it was a really great program.

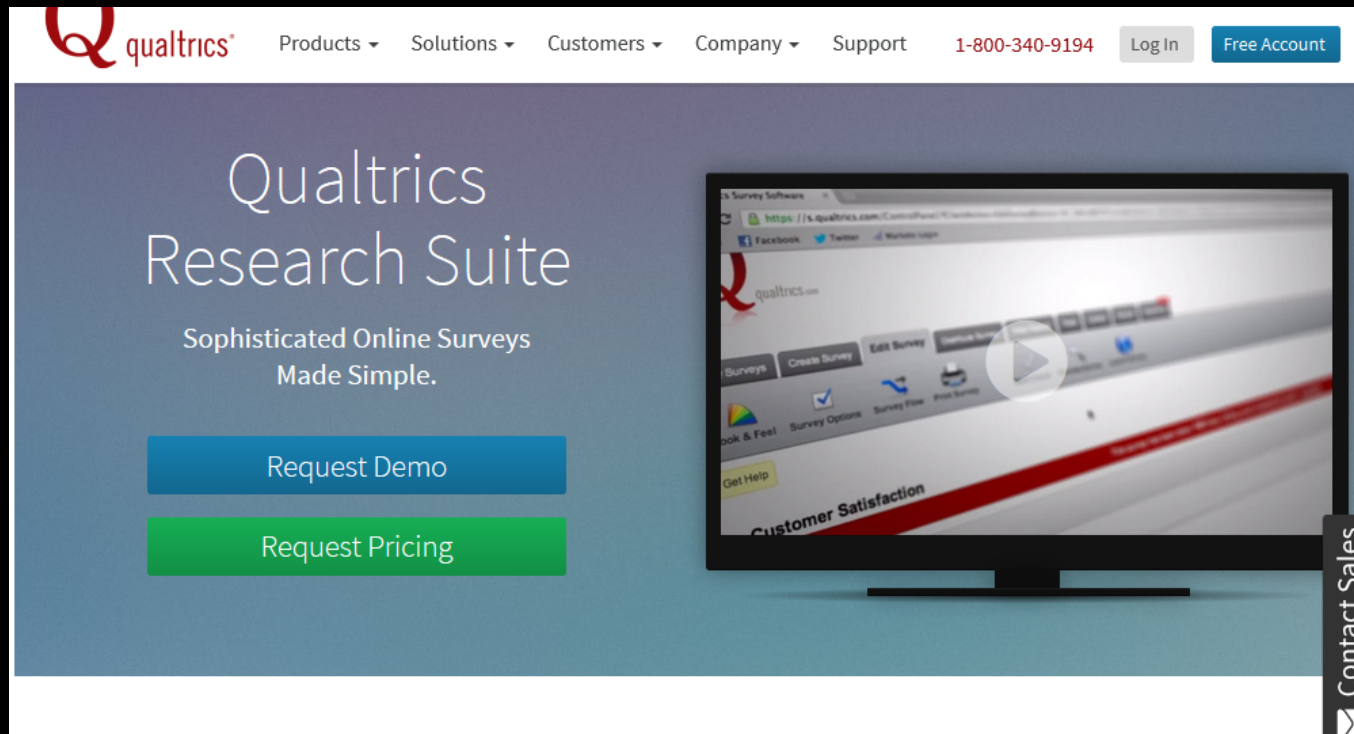
2/18/2014 11:00 PM   [View respondent's answers](#)

I thought everything was good, I thought it was a little too long, I felt like we would repeat stuff. At a point there was repetition. I sometimes would find myself thinking that we were going over something twice. The first time we went over something was always good, but the second time was redundant.

2/18/2014 10:58 PM   [View respondent's answers](#)

# QUALTRICS PRICING

- Pricing must be obtained by requesting a quote from company representatives. However, free trials are available.



<http://qualtrics.com/research-suite/>





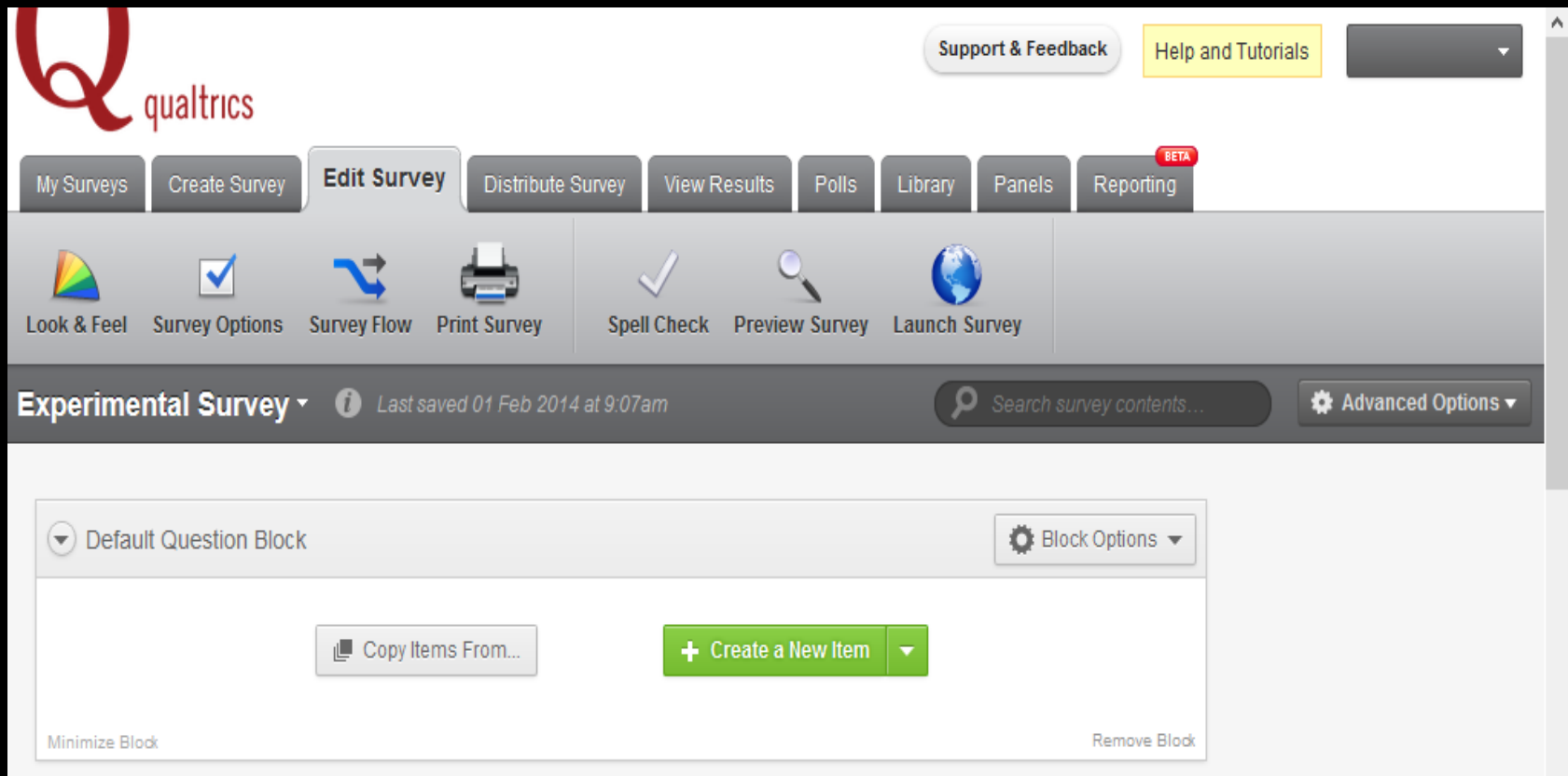
# QUALTRICS: WHAT'S NEW?

- Qualtrics now offers “Kiosk Mode”, which allows for offline storage on devices such as an iPad (additional purchase is required for this functionality).
- Updated summary reports and API documentation (i.e., help files and how-to guides).



# QUALTRICS API

- API = Application Programming Interface



# QUALTRICS

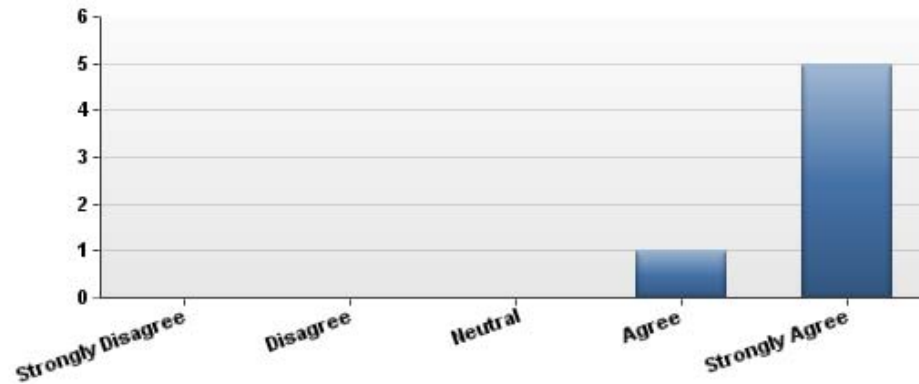


Table Options				
#	Answer	Response	%	
1	<a href="#">Strongly Disagree</a>	0	0%	
2	<a href="#">Disagree</a>	0	0%	
3	<a href="#">Neutral</a>	0	0%	
4	<a href="#">Agree</a>	1	17%	
5	<a href="#">Strongly Agree</a>	5	83%	
Total		6	100%	

Statistic	Value
Min Value	4
Max Value	5
Mean	4.83
Variance	0.17

Static Content

- Descriptive Text
- Graphic

Standard Questions

- Multiple Choice
- Matrix Table
- Text Entry
- Slider
- Rank Order
- Side by Side

Specialty Questions

- Constant Sum
- Pick, Group, and Rank
- Hot Spot
- Heat Map
- Sliding Scale
- Gap Analysis
- Drill Down

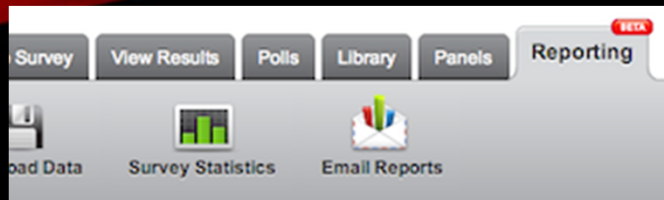
Advanced

- Timing
- Meta Info Question
- File Upload
- Captcha Verification
- Question Library

Replace From Library

This integration combines the capabilities of Qualtrics Research Suite with the data collected in Adobe Analytics to create powerful analytics and optimization opportunities for your organization. Note: Additional purchase required.

# QUALTRICS REPORTING



- *Reporting Beta* is the new replacement for *View Reports*.
- Allows for customization and pulling up multiple reports.

3. What did you perceive as strengths of the program as a student?

Balance Check Don't Feel Felt Find **Good**

Great Group Ins Long **Mentor** Necessarily Occasional Point

**Program** Redundant Repeat Repetition Sessions Specific

Strength Strongest Stuff **Thing** Thinking **Thought**

**Time** Um Week Wouldn't

Text Entry

I thought everything was good, I thought it was a little too long, I felt like we would repeat stuff. At a point there was repetition. I sometimes would find myself thinking that we were going over something twice. The first time we went over something was always good, but the second time was redundant.

I don't know if necessarily any one thing was the strongest thing in the program, I feel like it was a really good balance between the group sessions and the mentoring and occasional check-ins during the week, um from your mentor. Like I wouldn't say that there was one specific strength. I think all the way around it was a really great program.

# COMPARISON TABLE

	SurveyMonkey	Qualtrics
Is a free version available?	Yes	Trial
Is there a question bank to pull from?	Yes	Yes
Can individual responses be obtained?	Yes	Yes
Can data be exported?	Yes	Yes
Is it possible to use HTML tags?	Yes	Yes
Embed surveys on Facebook?	Yes	Yes
Automated phone surveys?	Yes	No
Online library storage for graphics?	No	Yes





# COMPARISON TABLE

	SurveyMonkey	Qualtrics
HTML and XML Data Export?	Yes	Yes
Survey expiration date possible?	Yes	Yes
Send out anonymous reminders?	No	Yes
E-mail within website?	No	Yes
Pricing available on website?	Yes	No
Mobile surveys available?	Yes	Yes
Automatic data descriptives?	Yes	Yes
Spell-check?	Yes	Yes



# HTML TAGS IN BOTH (1/3)

- HTML = Hypertext Markup Language
  - It is the language in which most webpages are designed.
- The sites give you the ability to add rich content to the text of your survey
  - Bold
  - Underline
  - Italics
  - Bullet Points
  - Hyperlink



# HTML TAGS IN BOTH (2/3)

- Examples of HTML tags

Attribute	Code	Result
Bold	<code>&lt;b&gt; Text &lt;/b&gt;</code>	<b>Text</b>
Italics	<code>&lt;i&gt; Text &lt;/i&gt;</code>	<i>Text</i>
Underline	<code>&lt;u&gt; Text &lt;/u&gt;</code>	<u>Text</u>
Hyperlink	<code>&lt;a target="_blank" href="https://erm.un cg.edu/"&gt;Text&lt;/a&gt;</code>	<a href="https://erm.un&lt;br/&gt;cg.edu/">Text</a>
Bullet Points	<code>&lt;ul&gt; Text &lt;li&gt; Subtext 1&lt;/li&gt; &lt;li&gt; Subtext 2&lt;/li&gt; &lt;li&gt; Subtext 3&lt;/li&gt; &lt;/ul&gt;</code>	Text <ul style="list-style-type: none"><li>• Subtext 1</li><li>• Subtext 2</li><li>• Subtext 3</li></ul>



# HTML TAGS IN BOTH (3/3)

- The capabilities of using HTML is extended in Qualtrics, as it also allows Javascript and Cascading Style Sheets (CSS) to be used, which are other web-based languages for performing actions and changing layout features.
- In other words, Qualtrics has fewer limitations for innovative question types if one can write the code to do so.



# ACTIVITY 2:

# SURVEYMONKEY







# R QUALITATIVE DATA ANALYSIS (RQDA) PACKAGE: A FREE QUALITATIVE DATA ANALYSIS TOOL

Learn how to import and work with  
qualitative data in R.



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# RQDA

- Introduction
  - What is RQDA?
  - Features
- Getting Started
  - Install the RQDA GUI
  - Start the Program
  - Create project
  - Import files
- GUI Analysis Capabilities
  - Coding (Codes and Code Categories)
  - Output
  - Cases/Attributes/File Categories/Settings
  - Interrater Agreement



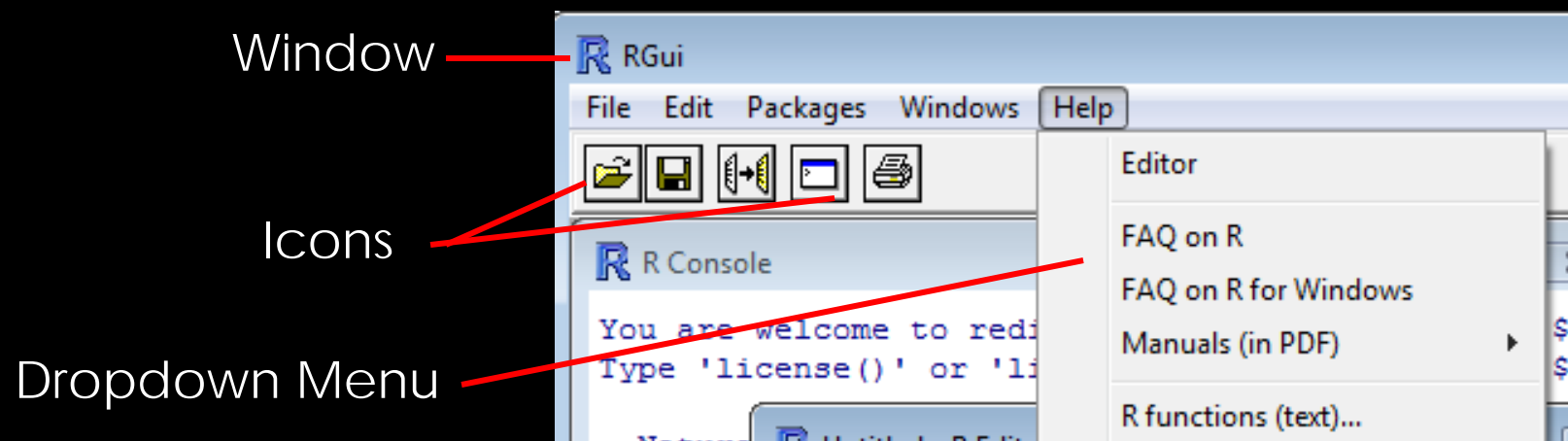
# WHAT IS RODA

- It's a free qualitative data analysis program
- Works with Windows, Mac, and Linux
- GUI Application (Graphical User Interface)
- Syntax-based Application
- Organizes and documents **[PART OF]** the analytic process (i.e., the coding process, some analyses, and limited data visualization).



# WHAT ARE GUI AND SYNTAX?

- A GUI is a visual way for you to manipulate the syntax by a mouse or keyboard.



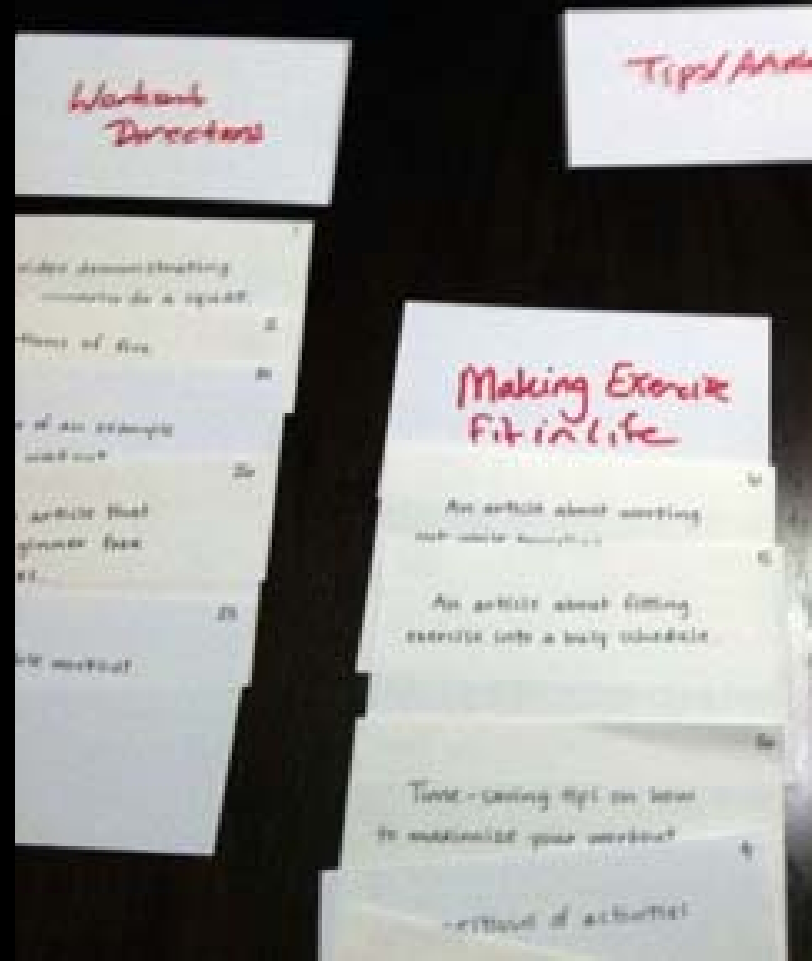
- Syntax is the program's computer language

```
R C:\Users\Lindsey\Documents\NCARE 2014\NCARE 2014 RQDA synt
setwd('C:/Users/Lindsey/Documents/NCARE 2014')
library(RQDA)
RQDA ()
|
```



# RQDA FEATURES

- Analyzes any text-based qualitative data (provided it is in a .txt file format)
- Organizes a simple research design and structure prior to collecting data
- Adds efficiency, accuracy, and sharing capabilities to the analysis of text-based qualitative data (as compared to more "by hand" methods)





# GETTING STARTED: INSTALL RQDA (WITH THE R GUI AND SYNTAX)

- To use GUI and syntax to install and open the RQDA program first download the R program on your computer (<http://cran.us.r-project.org/>) and use the following instructions to set up RQDA:

## Part 1

- Click on "Packages" and then on "Install Packages" to pull up a list of available packages to select from.
- Scroll to the package named "RGtk2" and install.
- Install the "RQDA" package in the same manner.



# GETTING STARTED: INSTALL RQDA (WITH GUI AND SYNTAX)

## Part 2

- Run the following syntax in a new script file:

```
require(RQDA)
```

- A window should pop-up prompting you to install "Gtk+". Agree to install this package.
- To open the RQDA GUI run the following syntax in your open script file:

```
RQDA()
```



# GETTING STARTED: INSTALL RQDA (WITH SYNTAX ONLY)

- To use all syntax to install and open the RQDA program run the following syntax:

```
setwd('C:/Users/Lindsey/Documents/NCARE 2014')
```

```
install.packages("RGtk2")
```

```
install.packages("RQDA")
```

```
require(RQDA)
```

```
RQDA()
```



# GETTING STARTED: START RQDA

- After you have successfully installed the RQDA program you can reopen the program with the following syntax:

```
setwd('C:/Users/Lindsey/Documents/NCARE 2014')
```

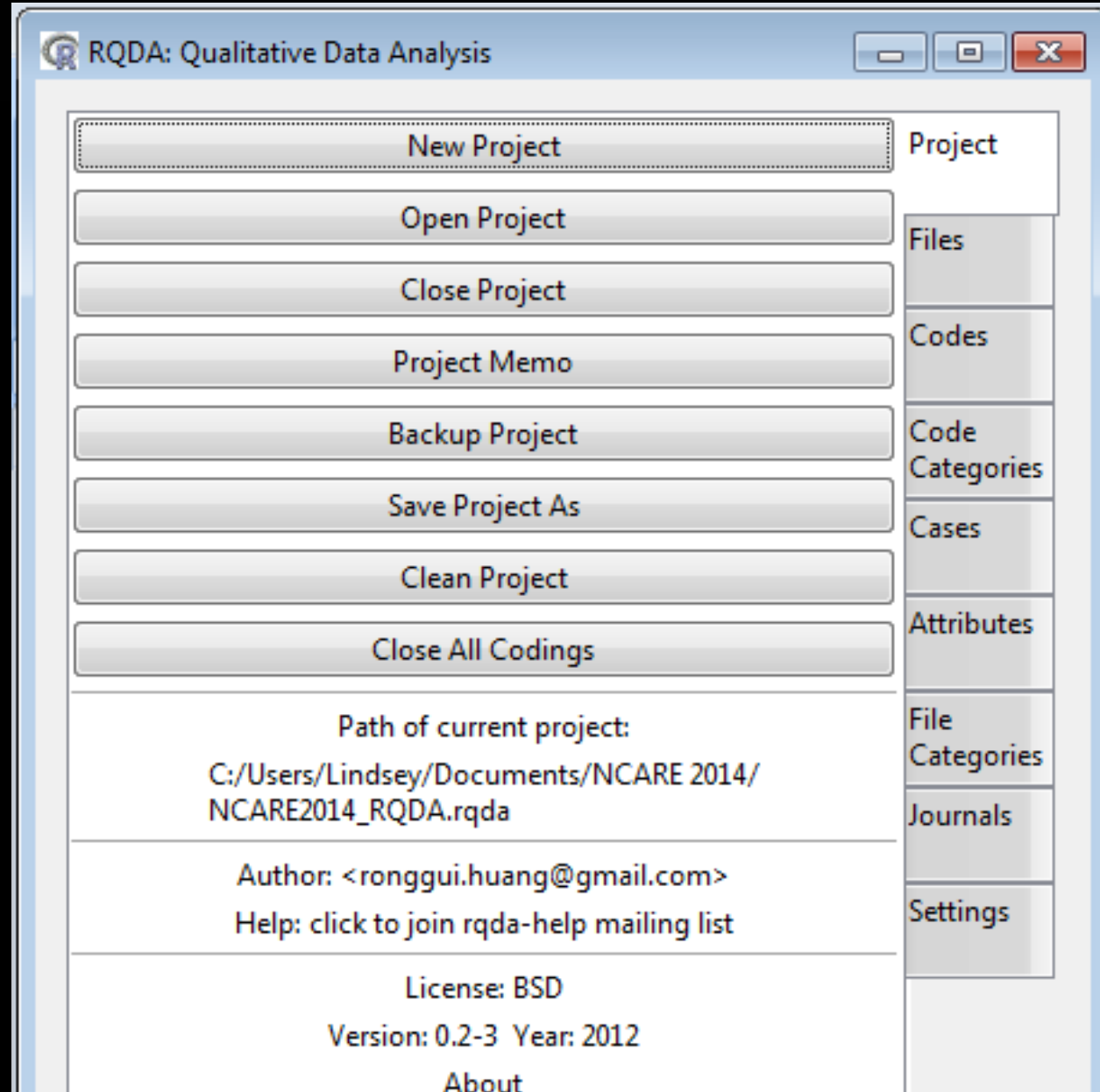
```
library(RQDA)
```

```
RQDA()
```



# Create Project

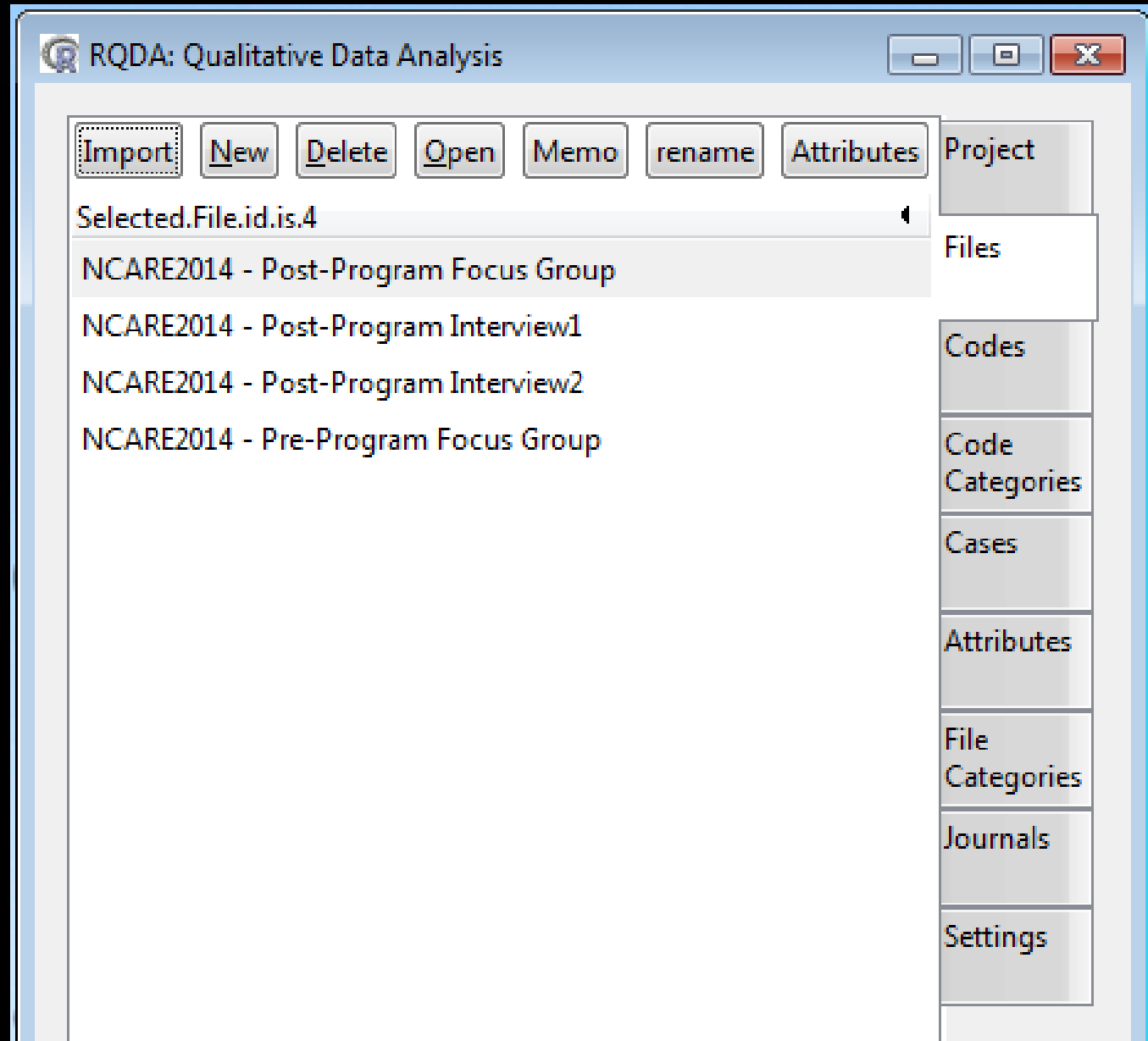
- **Save** your project
- **Backup** project creates a copy
- **Clean** project removes any deleted files
- **Path** of current project shows where your project is saved





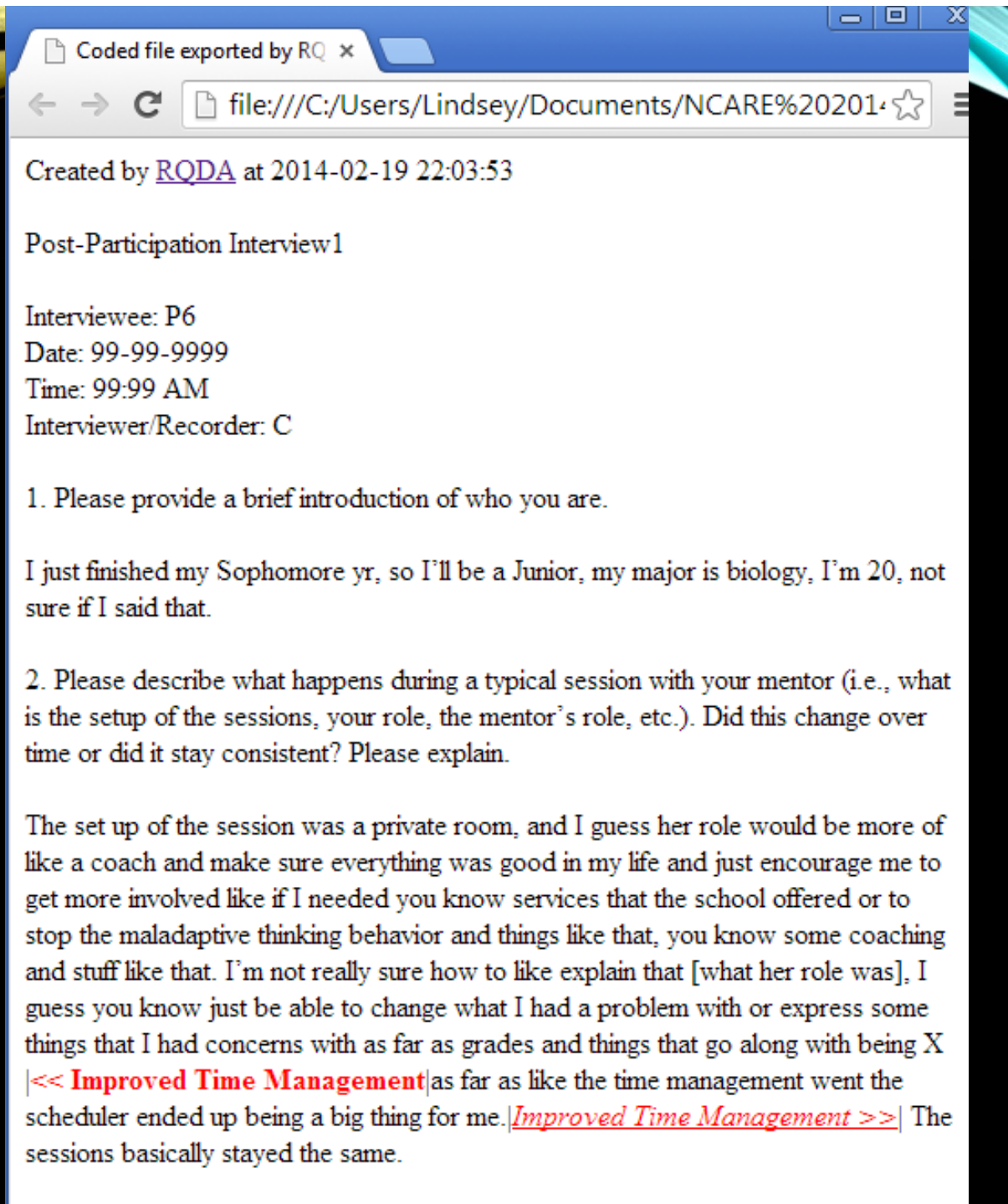
# Import Files

- **Import** .txt files only
- **Delete** temporarily deletes the file you select
- **Memo** is useful to document your process



# File .html Output

- Right-click on a file
- Select export coded file as HTML
- Enter name for your HTML file



The screenshot shows a web browser window with a single tab titled "Coded file exported by RQDA". The address bar shows the file path: "file:///C:/Users/Lindsey/Documents/NCARE%20201...". The page content includes a creation timestamp, interview details, and two numbered questions with their corresponding answers. The text is formatted with bold and italicized tags for emphasis.

Coded file exported by RQDA

file:///C:/Users/Lindsey/Documents/NCARE%20201...

Created by [RQDA](#) at 2014-02-19 22:03:53

Post-Participation Interview1

Interviewee: P6  
Date: 99-99-9999  
Time: 99:99 AM  
Interviewer/Recorder: C

1. Please provide a brief introduction of who you are.

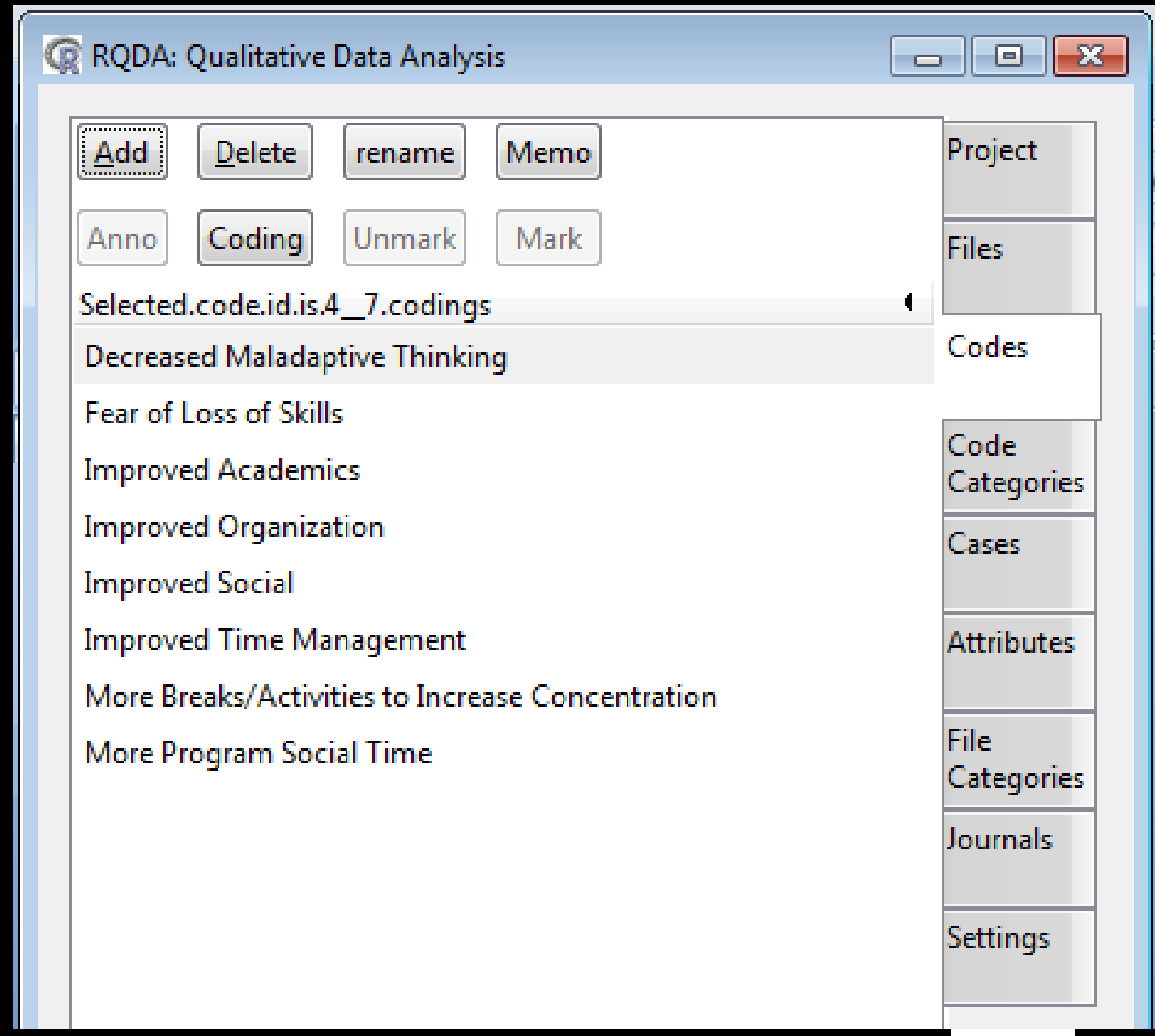
I just finished my Sophomore yr, so I'll be a Junior, my major is biology, I'm 20, not sure if I said that.

2. Please describe what happens during a typical session with your mentor (i.e., what is the setup of the sessions, your role, the mentor's role, etc.). Did this change over time or did it stay consistent? Please explain.

The set up of the session was a private room, and I guess her role would be more of like a coach and make sure everything was good in my life and just encourage me to get more involved like if I needed you know services that the school offered or to stop the maladaptive thinking behavior and things like that, you know some coaching and stuff like that. I'm not really sure how to like explain that [what her role was], I guess you know just be able to change what I had a problem with or express some things that I had concerns with as far as grades and things that go along with being X |<< **Improved Time Management**|as far as like the time management went the scheduler ended up being a big thing for me. *Improved Time Management* >>| The sessions basically stayed the same.

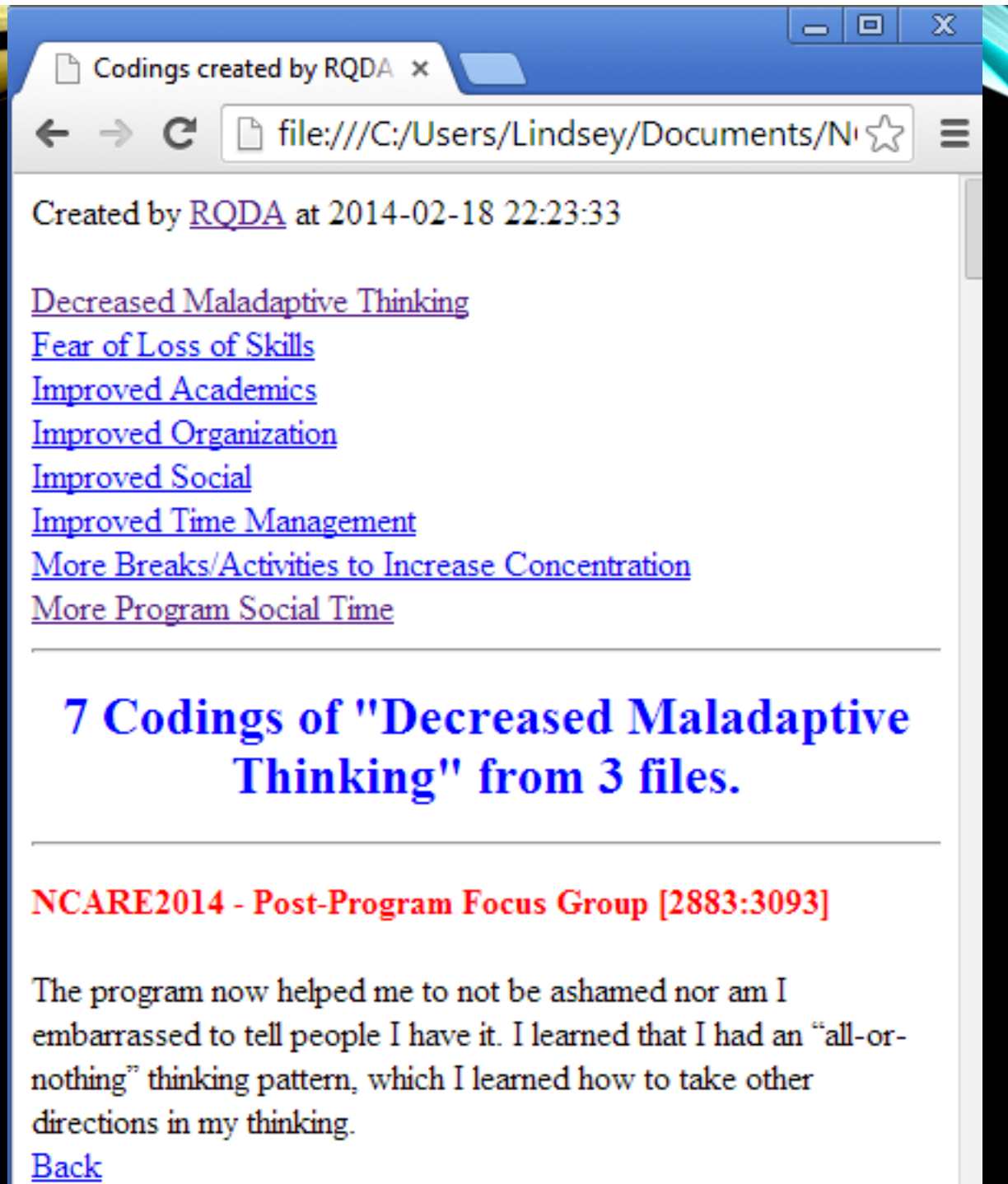
# Codes

- **Add** codes  
(Mark/Unmark)
- **Delete** function  
is useful to  
calculate  
interrater  
agreement
- **Memo** vs.  
**Annotate**



# Code .html Output

- Right-click on a code
- Select export codings as HTML
- Enter name for your HTML file
- Select one or more codes by holding ctrl down



The screenshot shows a web browser window with a single tab titled "Codings created by RQDA". The address bar shows the file path: "file:///C:/Users/Lindsey/Documents/N...". The page content includes a creation timestamp, a list of codings, a summary of 7 codings, and a focus group transcript.

Codings created by RQDA

Created by [RQDA](#) at 2014-02-18 22:23:33

- [Decreased Maladaptive Thinking](#)
- [Fear of Loss of Skills](#)
- [Improved Academics](#)
- [Improved Organization](#)
- [Improved Social](#)
- [Improved Time Management](#)
- [More Breaks/Activities to Increase Concentration](#)
- [More Program Social Time](#)

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**7 Codings of "Decreased Maladaptive Thinking" from 3 files.**

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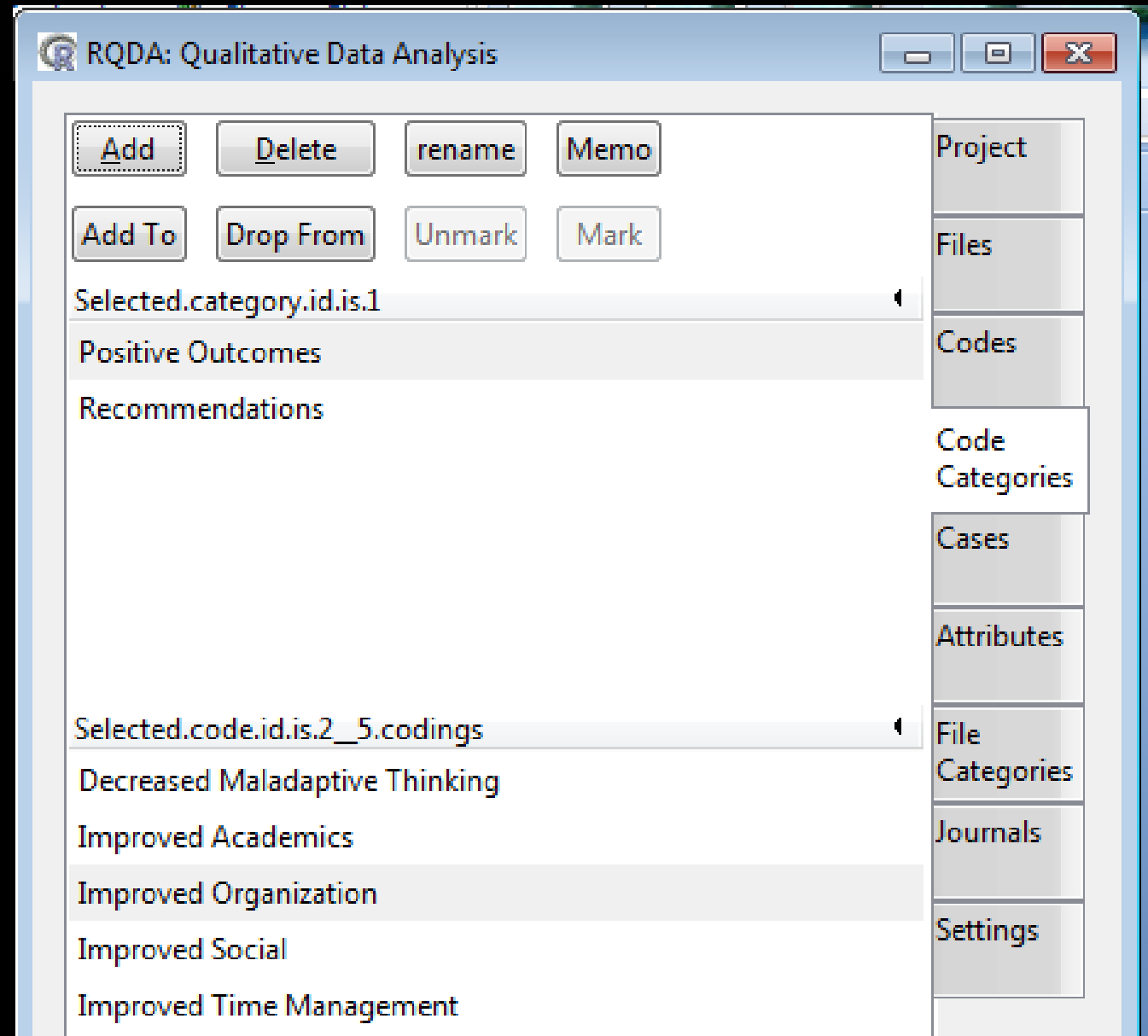
**NCARE2014 - Post-Program Focus Group [2883:3093]**

The program now helped me to not be ashamed nor am I embarrassed to tell people I have it. I learned that I had an "all-or-nothing" thinking pattern, which I learned how to take other directions in my thinking.

[Back](#)

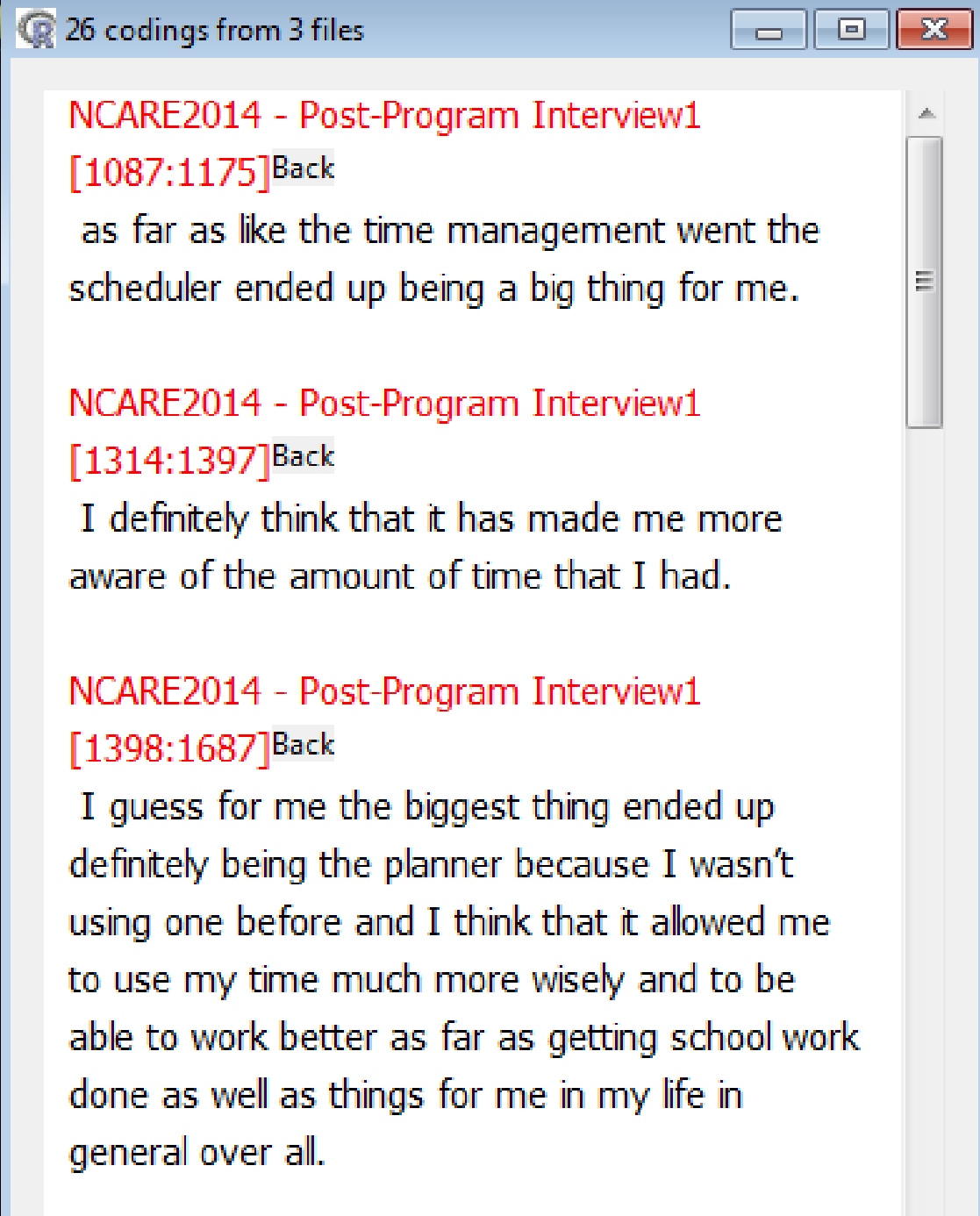
# Code Categories

- Mark codes
- Drop from function removes codes from a code category



# Code Categories Output

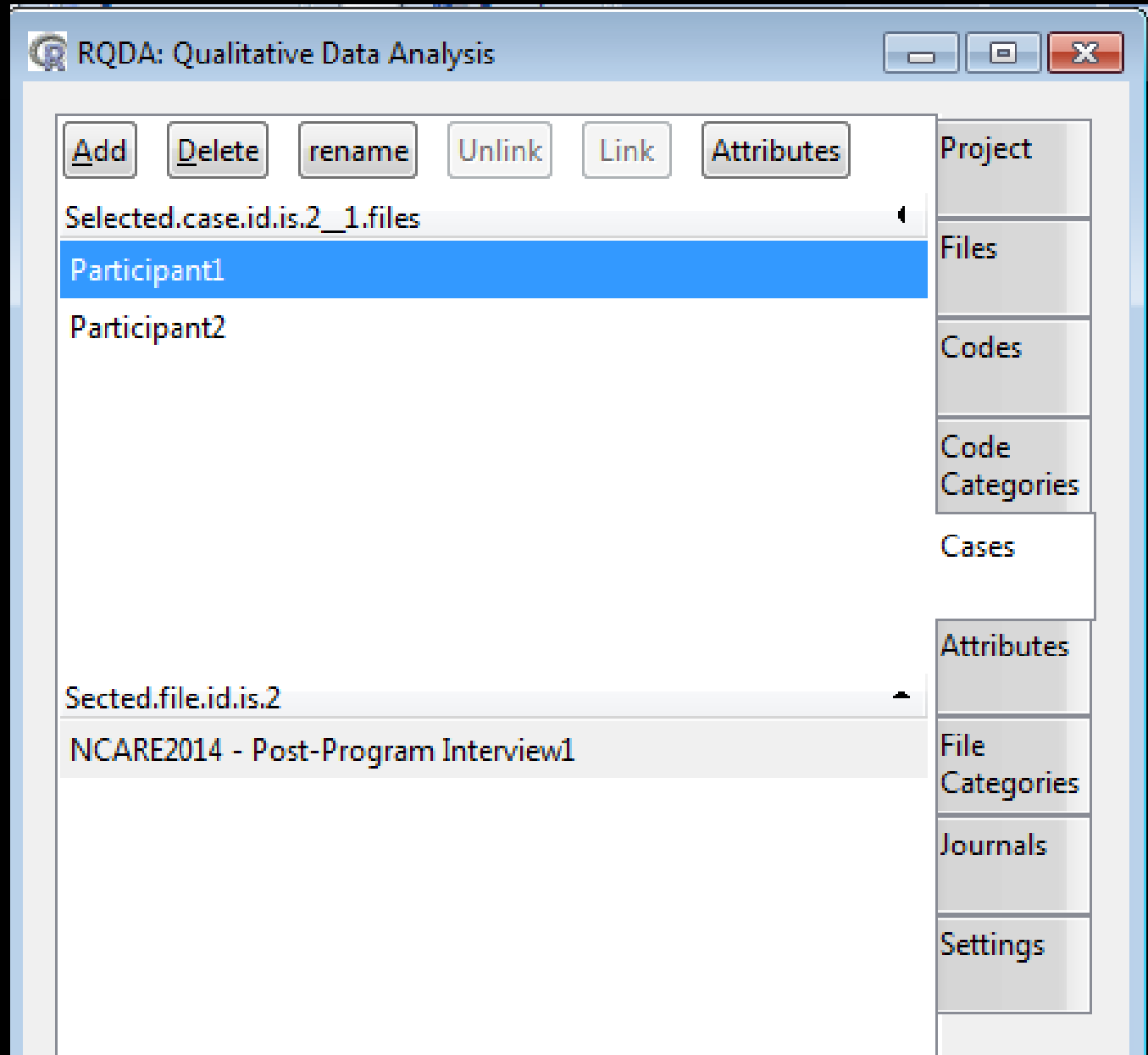
- **Right-click** on a code category
- **Select** codings of selected category
- **Opens** all segments of text coded from that code category





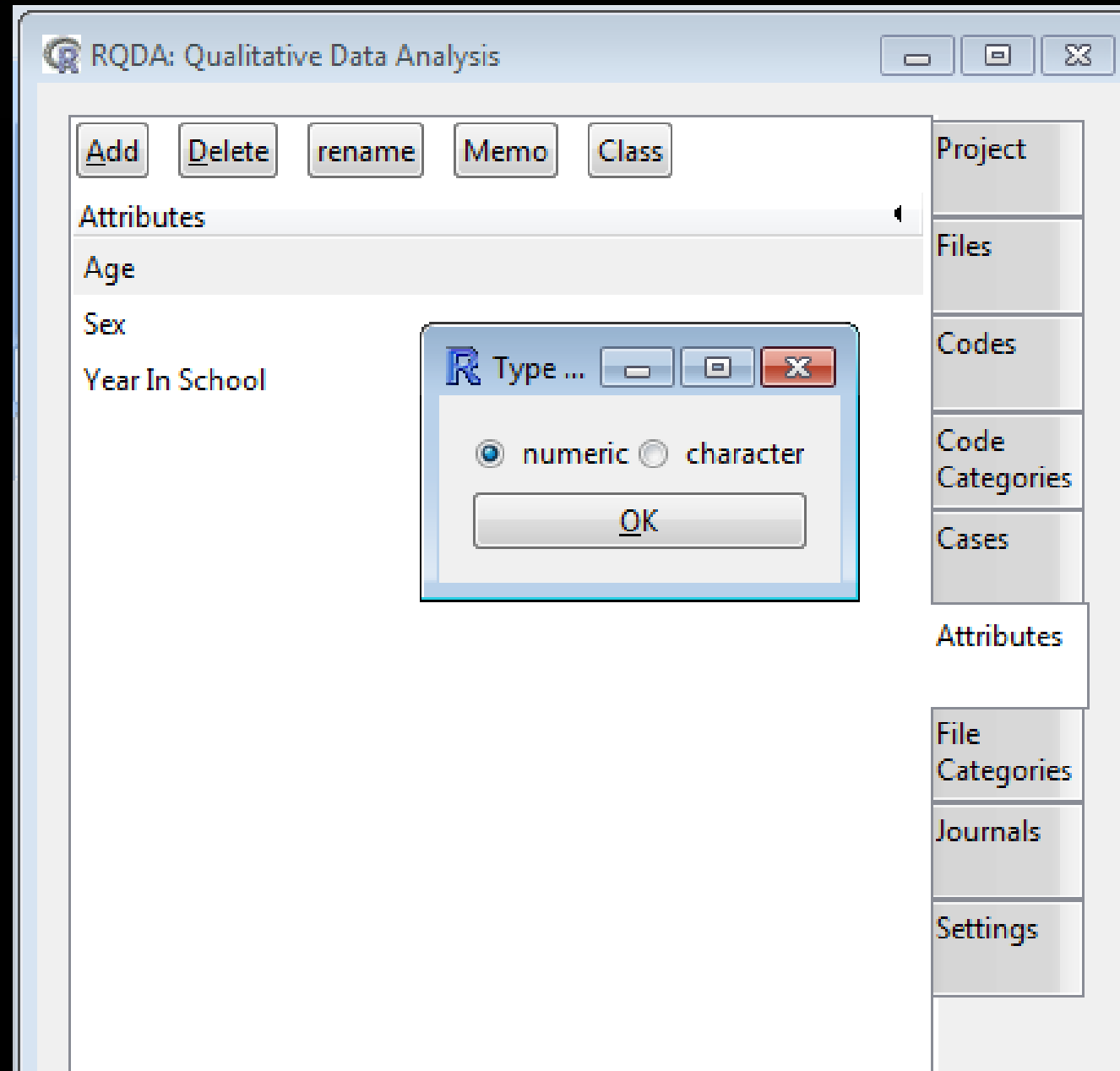
# Cases

- Organizes files by case



# Attributes

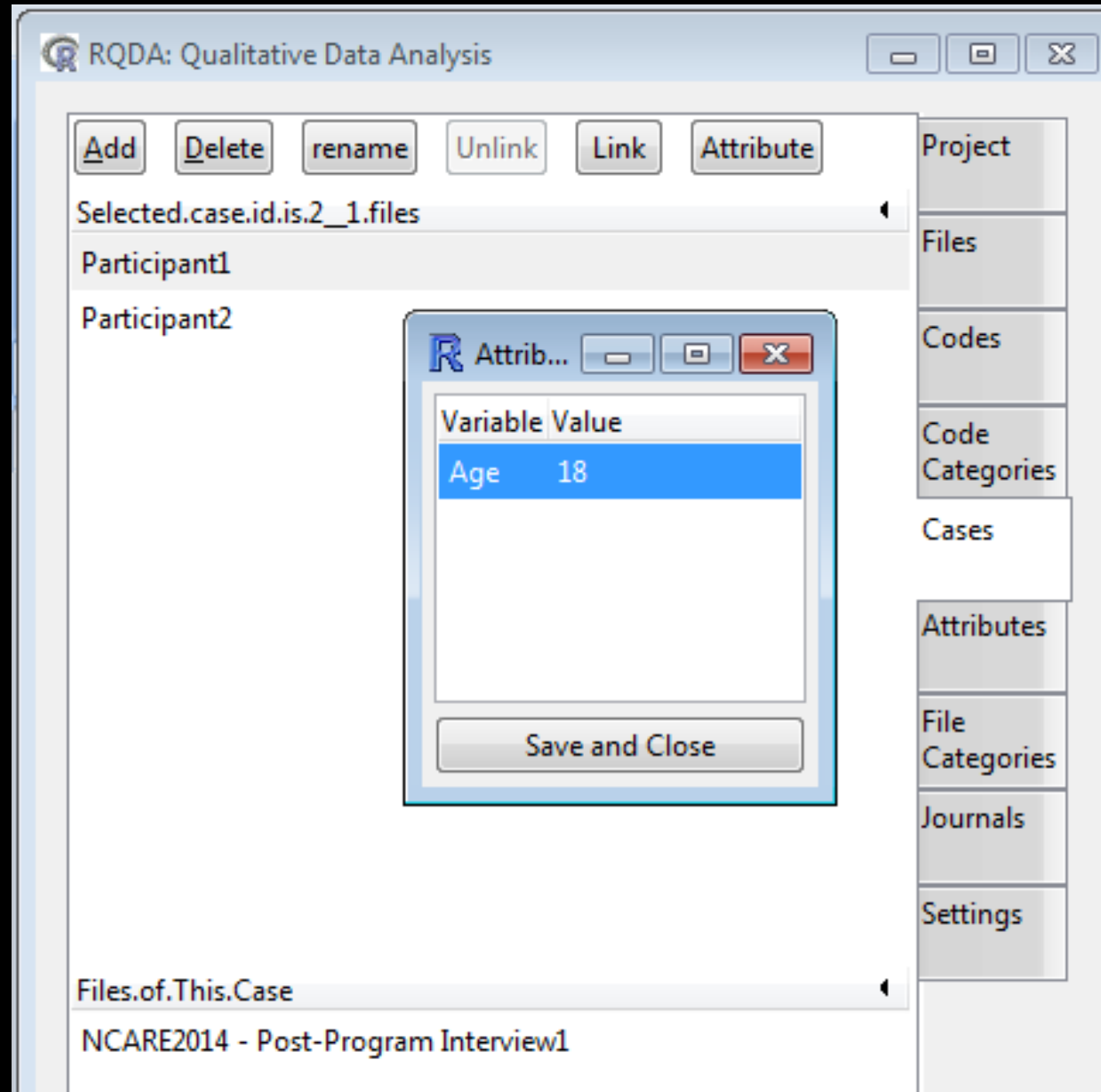
- Attributes are variables
- **Class** specifies the type of variable
- **Select** the attribute you want to assign and go to **Files** or **Cases** to assign it



# Quirk

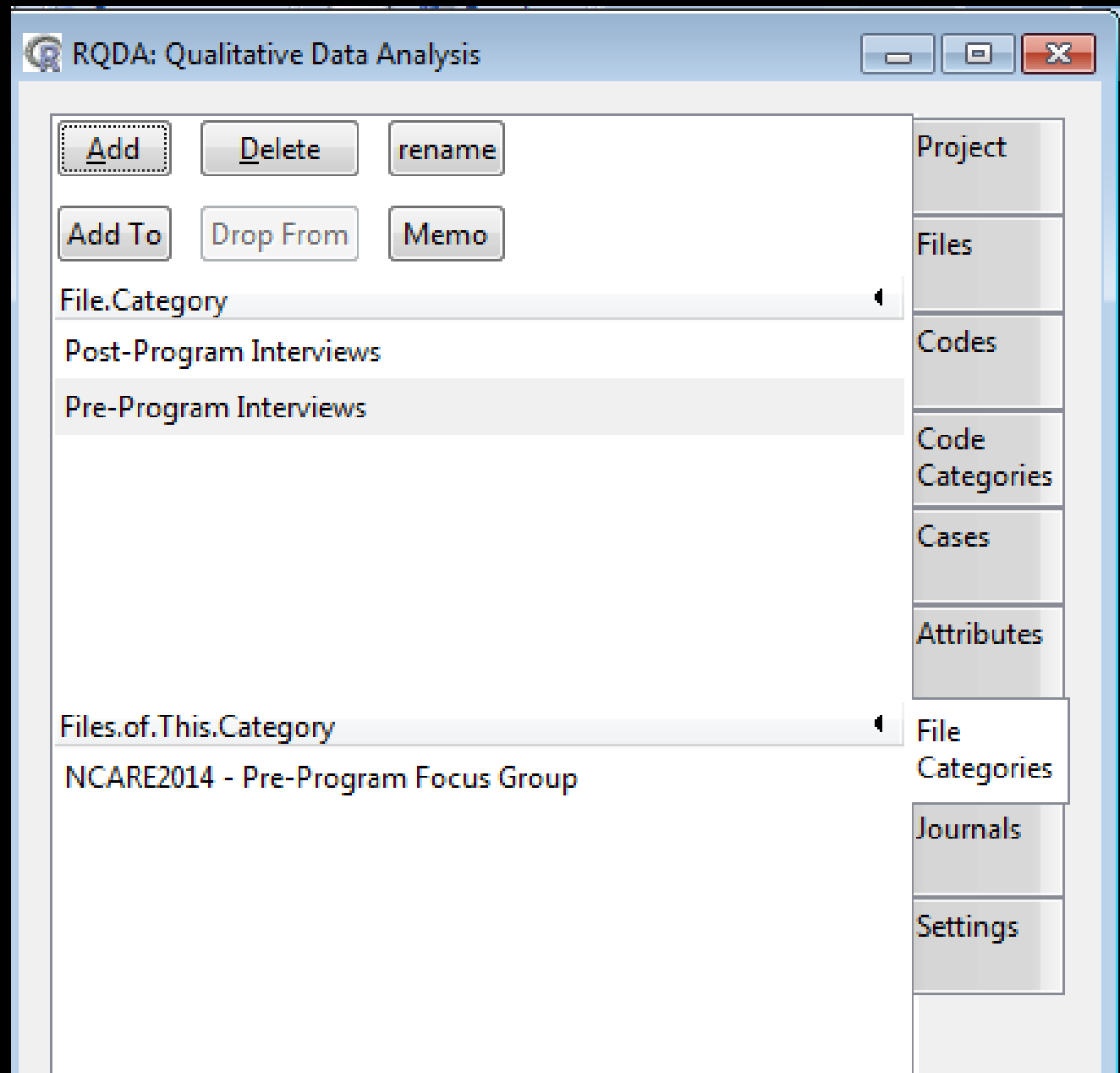
## Assigning Attributes

- After you enter in your attribute value be sure to **click in the white space** below the line so the attribute highlights blue and **save and close**



# File Categories

- Organizes files by overarching categories



# Settings

- **Type of Retrieval:** unconditional, case, filecategory, or both
- **Name of coder**
- **Current coding table**

The screenshot shows the 'RQDA: Qualitative Data Analysis' window with the 'Settings' tab selected. The window has a title bar with standard minimize, maximize, and close buttons. The main area contains a 'Settings' section with a 'Click to set font' button. Below this, there are two columns of settings. The first column includes 'Name of Coder' (text field with 'Lindsey Varner'), 'Color for Coding' (dropdown with 'blue'), 'Current coding table' (dropdown with 'coding'), and 'Show File Property' (dropdown with 'FALSE'). The second column includes 'File Encoding' (text field with 'unknown'), 'Color for Case' (dropdown with 'gold'), 'Byte Order Mark' (dropdown with 'FALSE'), and 'Type of Retrieval' (dropdown with 'unconditional'). On the right side of the window, there is a vertical sidebar with buttons for 'Project', 'Files', 'Codes', 'Code Categories', 'Cases', 'Attributes', 'File Categories', 'Journals', and 'Settings'.

Settings	
<b>Name of Coder</b>	<b>File Encoding</b>
Lindsey Varner	unknown
<b>Color for Coding</b>	<b>Color for Case</b>
blue	gold
<b>Current coding table</b>	<b>Byte Order Mark</b>
coding	FALSE
<b>Show File Property</b>	<b>Type of Retrieval</b>
FALSE	unconditional

# INTERRATER AGREEMENT

- One way to explore Interrater agreement...
  - 1) Have one coder code a file with a code specific to the coder, for example: IRA\_Coder1
  - 2) After coding delete that code (temporarily)
  - 3) Have the second coder code the file with a code specific to that coder, for example: IRA\_Coder2
  - 4) After coding, use the function undelete() to bring back coder 1's codings
  - 5) Use crossCodes() to check agreement (outputs the number of codes that match exactly)





## ADDITIONAL RESOURCES

- Huang, R. (2011). **RQDA: R-based Qualitative Data Analysis User Manual**. R package version 0.2-1 and onwards. [http://rqda.r-forge.r-project.org/documentation\\_2.html#manual](http://rqda.r-forge.r-project.org/documentation_2.html#manual).
- Online resources



# ACTIVITY 3:

## RQDA



# NVIVO: A MORE EXPENSIVE QUALITATIVE DATA ANALYSIS TOOL

Learn how to import and work with  
qualitative data in NVIVO



# NVIVO

- Introduction
  - What is NVIVO
  - Features
- Getting Started
  - Create project
  - Import data (with Sources)
- Analysis Capabilities
  - Coding through Nodes
  - Classifications (by source or by node)
  - Graphics (Coding summaries; coding models, tree map)
  - Interrater agreement



# WHAT IS NVIVO

- An excellent tool for qualitative and (potentially) mixed methods research
- Works with Windows, Mac, and Linux
- Only GUI Application (Graphical User Interface)
- Organizes and documents the **[ENTIRE]** analytic process (i.e., the coding process, analysis, and data visualization).



# NVIVO FEATURES

- Import multiple file formats and multiple types of data (i.e., interviews, field notes, focus groups, pictures, videos, surveys, websites, social media)
  - Work with data in any language
- Set up research design (simple or complex) and structure prior to collecting data
- Demonstrate “robustness”: coding comparisons
- Adds additional efficiency, accuracy, and sharing capabilities to the analysis of data collected through qualitative and mixed methods research designs.
- Team Collaboration






# GETTING STARTED: INSTALL NVIVO

<http://www.qsrinternational.com/products.aspx>

- You can download NVivo 10 for individual use or for Server use.
- Single licenses, multiple licenses at a discount, student licenses, semester licenses, and site licenses.
- Download in multiple languages: English, Chinese, French, German, Japanese, Portuguese, or Spanish





# GETTING STARTED: KEY TERMINOLOGY

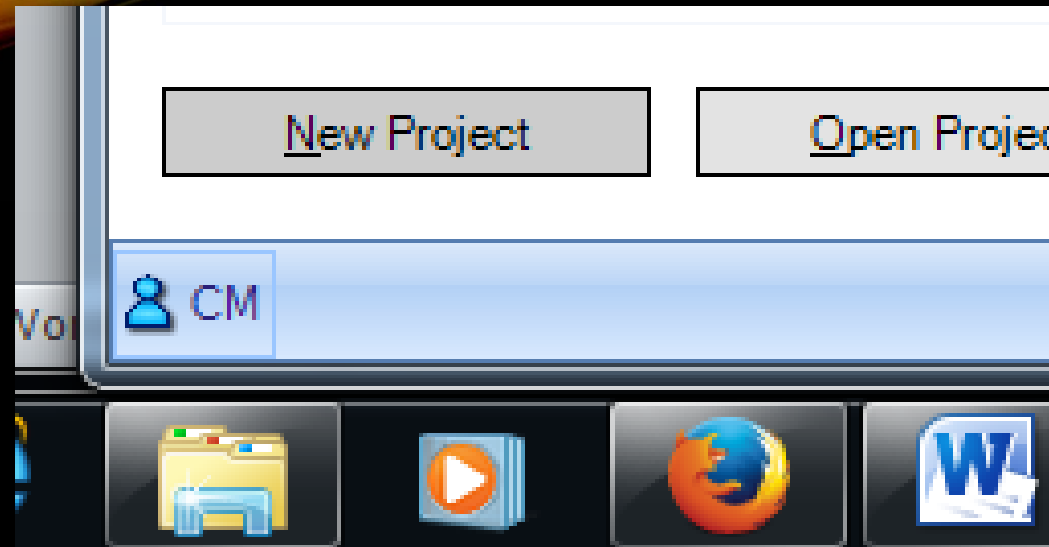
Term	Definition	Example(s)
Sources	The research materials	Documents, PDFs, datasets, audio, video, pictures, memos, framework matrices
Internal Sources	Documents that you can import into NVivo	See examples above
External Sources	Proxies for material that cannot be imported into NVivo	Books, physical artifacts, files saved on your computer
Nodes	"Containers for your coding"	Positive Attitude, Negative Attitude, Memorable Quotes
Source Classifications	Record information about your sources	Bibliographical data
Node Classifications	Record information about people, places, or other cases	Demographic data about people

# Create Project

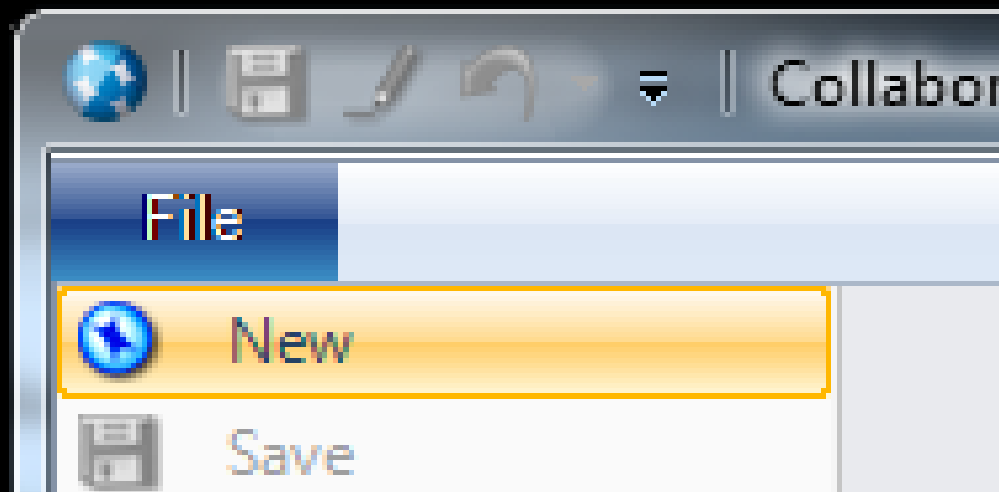
- In the lower left of the NVivo program, select **New Project**

OR

- Select **File** and "New" at the top left corner of the window

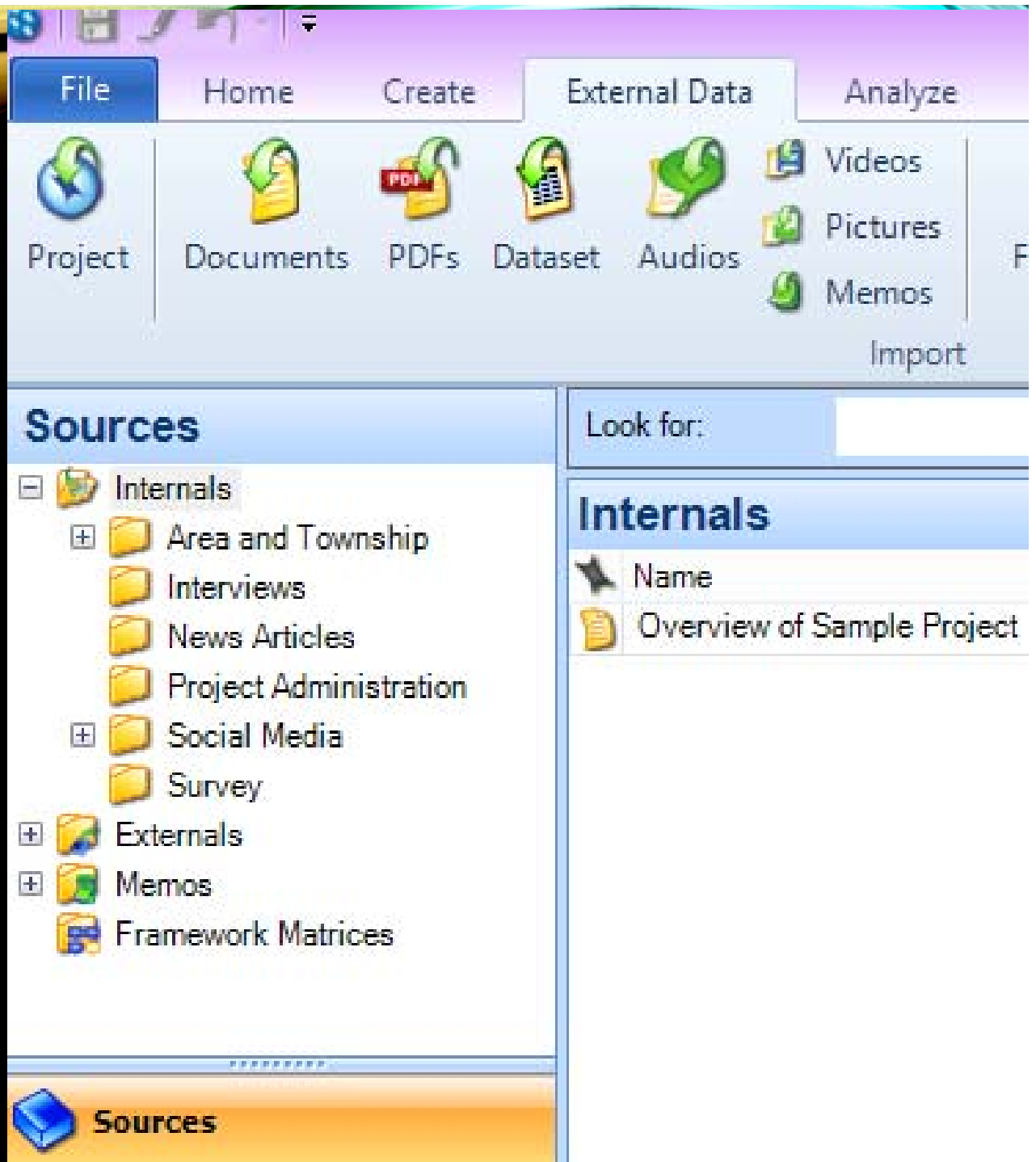


OR



# Import Sources

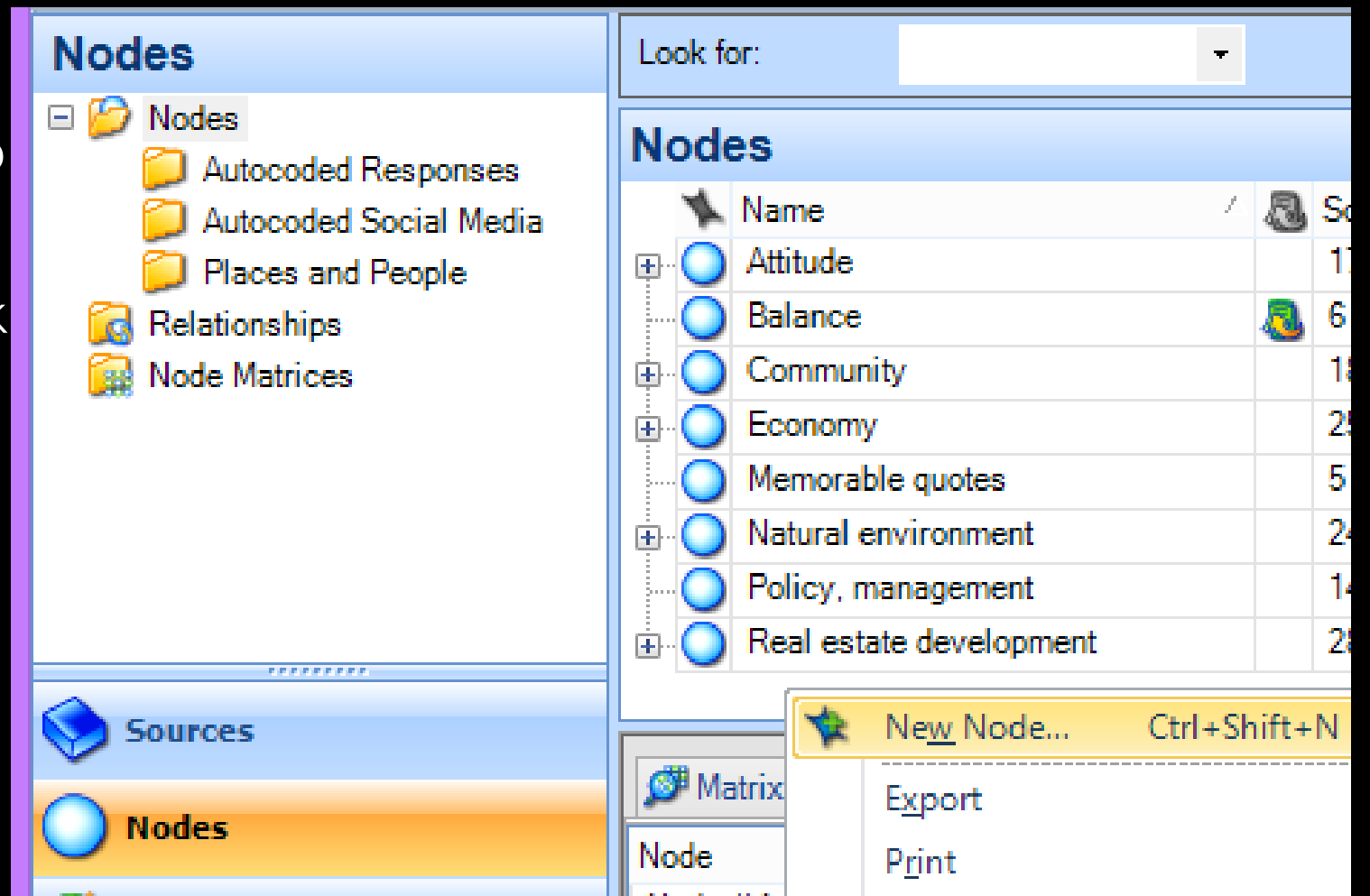
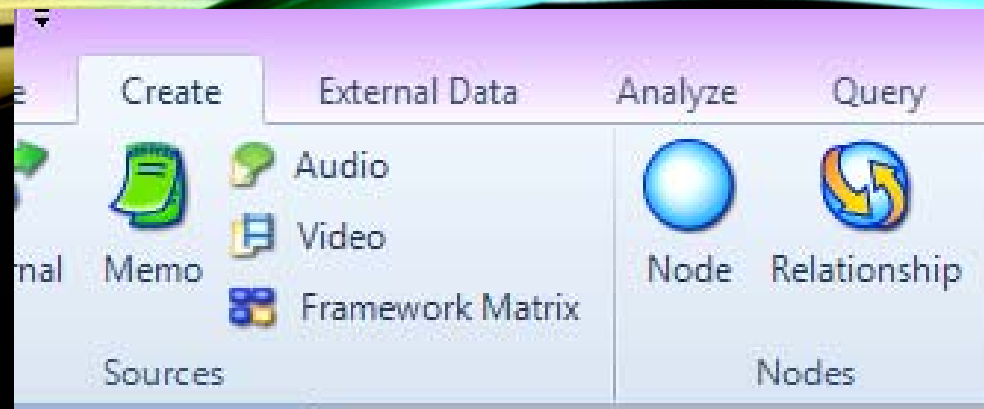
- Go to the **External Data** tab
- Look at the data you have in the **Sources** tab on the left side of the screen.
- Create new folders for:
  - Interviews, Surveys, PDFs, Webpages, Photos, Videos, etc.



# Coding with Nodes

Two options:

- Go to the **Create** tab
- Right-click in Nodes window
  - Select "New Node"



# Coding with Nodes

Right-click on a node and select  
“Node Properties”

The screenshot shows a software application window with a menu bar (File, Home, Create, External Data, Analyze, Query, Explore, Layout) and a toolbar. A 'Node Properties' dialog box is open, featuring a purple title bar and two tabs: 'General' (selected) and 'Attribute Values'. The 'General' tab contains the following fields:

- Name:** A text box containing the word 'Mixed'.
- Description:** A text area containing the text: 'A person's statement that they are indecisive as to whether their attitude is positive or negative. If a person states two different views, such as that they are positive about one aspect and negative about another, this is not mixed, but rather multiple, feelings.'
- Nickname:** An empty text box.
- Hierarchical name:** A text box containing the path 'Nodes\\Attitude\\Mixed'.

At the bottom of the dialog, there are several options and metadata fields:

- ☐ Aggregate coding from child nodes
- Color:** A dropdown menu showing 'Orange' with a color swatch icon.
- By:** Two text boxes showing the user 'WWS'.
- Created:** Two text boxes showing the dates '5/15/2010 4:06 PM' and '5/10/2012 12:23 AM'.

- Add Description
- Color
- Attribute Values



# Coding with Nodes

Create  
**Child  
Nodes** by  
right-  
clicking on  
an existing  
node and  
selecting  
"New  
Node"

Notice the  
Hierarchical name  
places the new node  
"Positive" under the  
current node  
"Attitude"

The screenshot shows the 'Nodes' application interface. On the left, a tree view under the 'Nodes' header shows a hierarchy: 'Attitude' (parent) with child nodes 'Mixed', 'Negative', 'Neutral', and 'Positive'. Below this, a 'Matrix Coding Query' section shows a list of nodes: 'Node', 'Nodes\Attitude', and 'Nodes\Attitude\Negative'. The main panel on the right is titled 'Attribute Values' and contains the following fields:

Attribute Values	
Name	Positive
Description	
Nickname	
Hierarchical name	Nodes\Attitude\Positive

A large black arrow points from the 'Positive' text in the 'Name' field down to the 'Nodes\Attitude\Positive' text in the 'Hierarchical name' field, illustrating the hierarchical naming convention.

# Coding Selections

*Tell me about your life in the South. How long have you or your family been in the South?*

**Barbara**

My family moved down in Georgia when I was in middle school, although I've moved away.

*My parents still live here. They live in the South, and went to Beaufort Elementary and college. So I've lived here most of my life.*

Menu Item	Shortcut
Select All	Ctrl+A
Code Selection	
Code In Vivo	Ctrl+F8
Uncode Selection	
Links	
Document Properties...	Ctrl+Shift+P
Code Selection At Existing Nodes...	Ctrl+F2
Code Selection At New Node...	Ctrl+F3
Code Selection At Current Nodes	Ctrl+F9

- Select Appropriate Text
- Right-Click Highlighted Text
- Code at "Existing Node" or "New Node"



# Coding Stripes

- Coding stripes allows the user to see how particular sections of text have been coded.
- Go to the **View** tab at the top of the page and Select "Coding Stripes".

[Click to edit](#)

he – to the environment, people intimate with the edge of the water and the weather.

And I like hot summers. I like hot, humid summer on ent and beautiful landscape. It's not dramatic. I also like this subtle, sublime sort of beauty here – the

Down East. And my – he's not really my uncle, but a set his flounder nets and things like that. He does

Coding Density

Barbara

Real estate development

Natural environment

Community

Q.4. Community and Environmental

Attitude

Econom

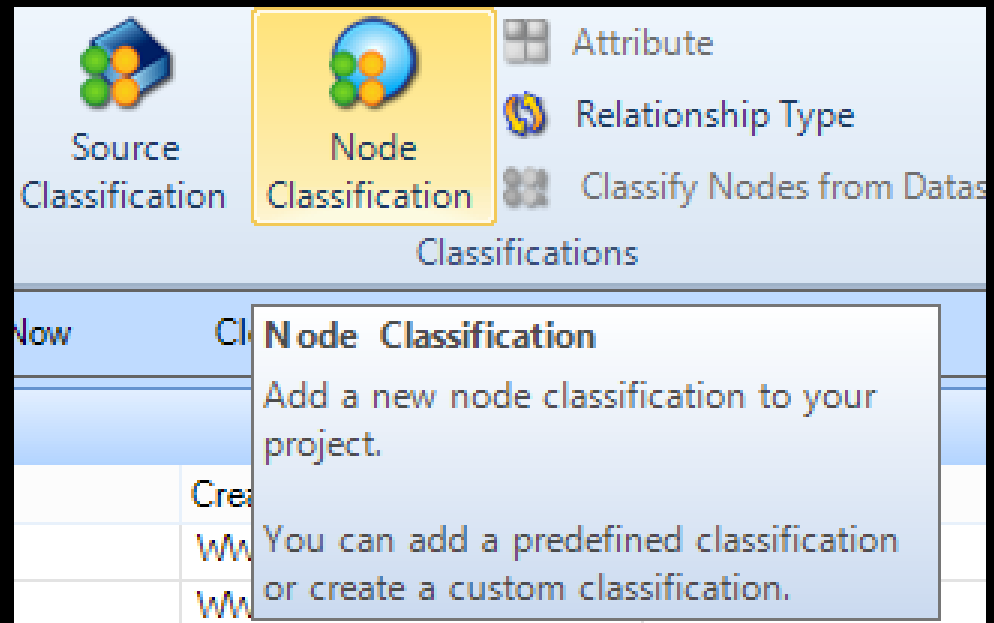
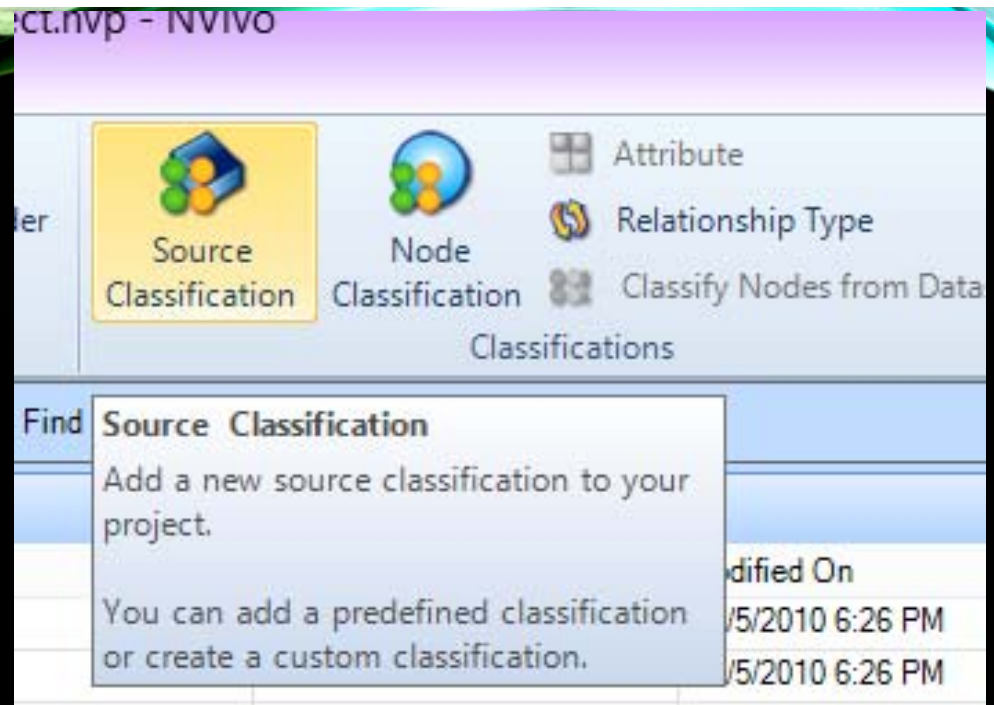
Q.3. Professional perspective on Do

Q.1. Connection to Down East

Connection to Down East

# Classification

- Go to the **Create** tab.
- Select "Source Classification" or "Node Classification"



# Attributes

- Assigned to Nodes or Sources
- Select the Node or Source to assign attribute to
- Go to **Create** Tab, "Attribute" button should be available

The screenshot shows a software interface with two main panels. The left panel, titled 'Node Classifications', displays a hierarchical tree structure. It has a root node 'Name' with a sub-node 'Person'. Under 'Person', there is a list of attributes: 'Respondent', 'Township', 'Community', 'Generations Down East', 'Commercial Fishing', 'Recreational Fishing', 'Income Tied to Resources', 'Opinion - Pace of Development', 'Age Group', 'Gender', and 'Education Level'. Each attribute has a small icon to its left. Below this list is a 'Place' node. The right panel is a dialog box titled 'New Attribute'. It has two tabs: 'General' and 'Values'. The 'General' tab is active. It contains fields for 'Name' (with the value 'Year'), 'Description' (with the value 'Describes participants' year in school'), 'Type' (with a dropdown menu showing 'Text' selected), and 'Bibliographical ID' (with a dropdown menu showing 'Integer' selected). The 'Values' tab is also visible but not active.

Node Classifications	
Name	
Person	
Respondent	
Township	
Community	
Generations Down East	
Commercial Fishing	
Recreational Fishing	
Income Tied to Resources	
Opinion - Pace of Development	
Age Group	
Gender	
Education Level	
Place	

New Attribute	
Name	Year
Description	Describes participants' year in school
Type	Text
Bibliographical ID	Integer



# Attributes

- Assign values in the “Values” tab
- Select the “Add” button at the bottom of the window
- Type the value and a description

New Attribute

General Values

Attribute Values			
Value	Description	Color	Default
Unassigned		None	<input checked="" type="checkbox"/>
Not Applicable		None	<input type="checkbox"/>
1	Freshman	None	<input type="checkbox"/>
2	Sophomore	None	<input type="checkbox"/>
3	Junior	None	<input type="checkbox"/>
4	Senior	None	<input type="checkbox"/>

Add Remove Sort Move Up Move Down











OK Cancel





# Query Features

- This tab allows you to do a text search, check word frequency, search codes, generate codes in matrix format, and analyze coding comparisons

/	Node		Source
	Community\Com		Thomas
	Community\Conn		Thomas
	Economy\Fishing		Thomas
	Economy\Jobs a		Thomas
	Natural environm		Thomas

Kappa	Agreement (%)
0.5929	89.24
0.9456	97.88
0.2811	91.3
0.9547	98.42
0	91.05



# Explore Features

- This tab allows you to create reports for coding summaries by node or source, node classification summaries, node summary reports, etc.
- Create charts, conduct cluster analyses and create tree maps.

Select the nodes you want to perform cluster analysis for, and how you want to form the clusters.

Nodes

Nodes

Select...

Clustered by

Word similarity



Using similarity  
metric

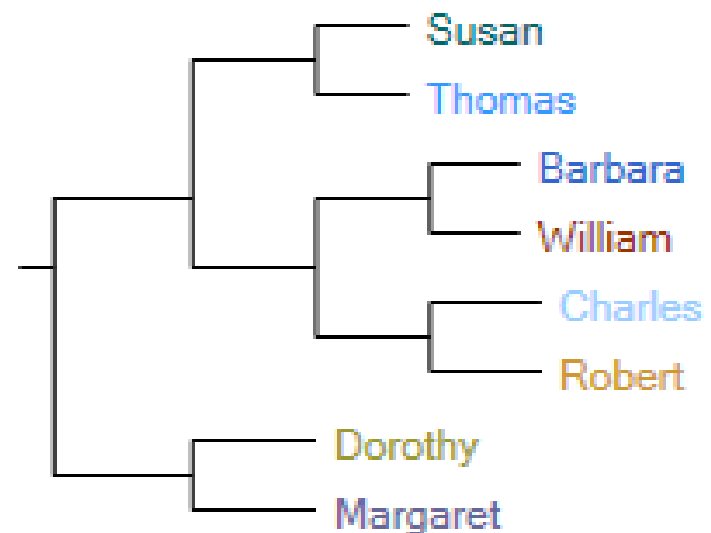
Pearson correlation coefficient



# Explore Features – Cluster Analysis

- Cluster Sources or Nodes
- Clusters Selected Sources/Nodes By:
  - **Word** similarity: if they have many words in common
  - **Coding** similarity: if they code many of the same sources
  - **Attribute** value similarity: if they share many of the same attribute values

Sources clustered by coding similarity



# ADDITIONAL NVIVO RESOURCES

- Utilize the help features in NVivo.
  - [http://www.qsrinternational.com/products\\_books-and-manuals.aspx](http://www.qsrinternational.com/products_books-and-manuals.aspx)
- NVIVO trainings and events
- Qualitative data analysis with NVIVO (2nd ed.) by Pat Bazeley and Kristiackson, London, Sage, 2013.



# ACTIVITY 4:

# NVIVO

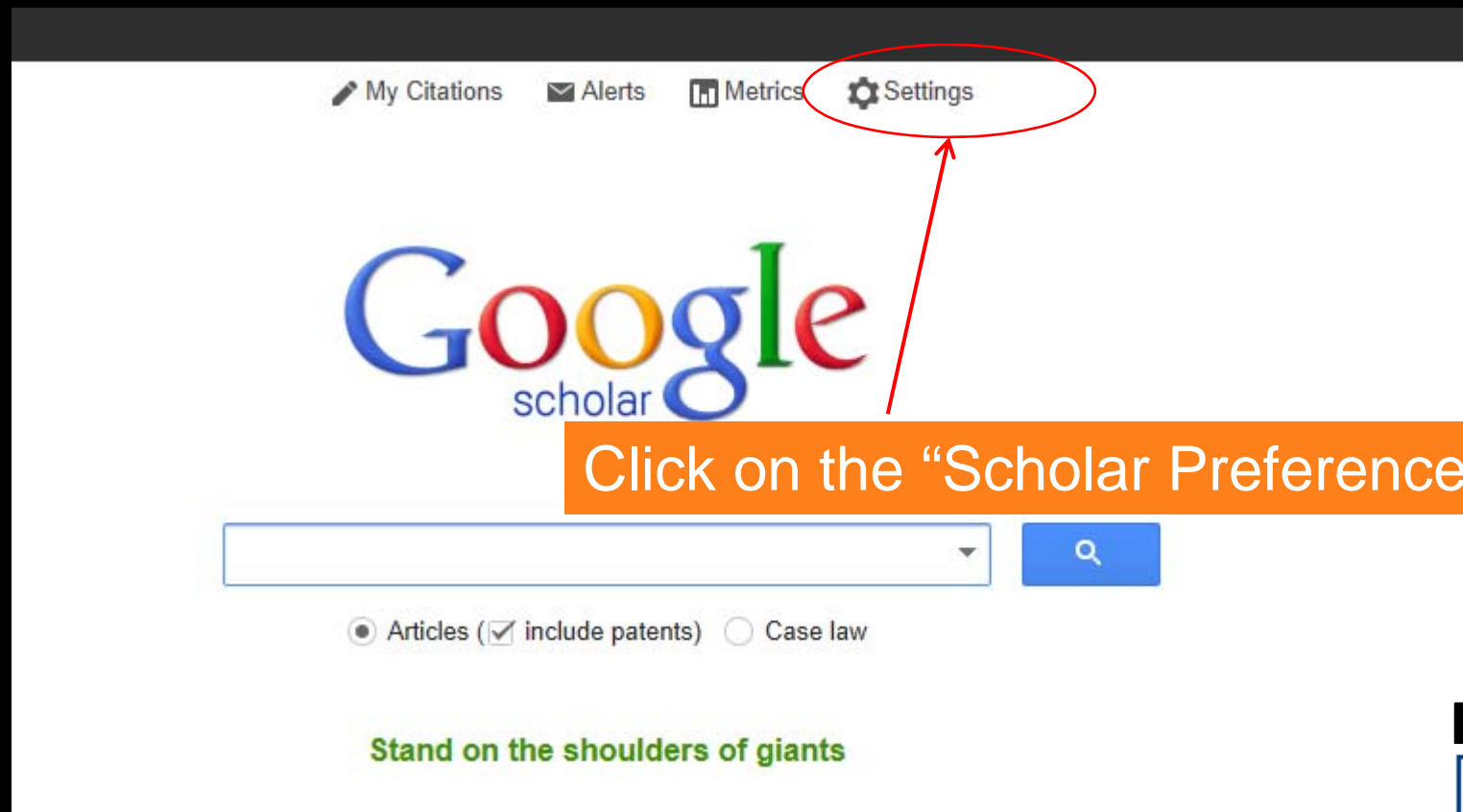


THANK YOU!





# HOOKING YOUR SEARCHES TO BIBLIOGRAPHIC SOFTWARE LIKE ENDNOTE



http://scholar.google.com/scholar\_settings?sciifh= Fwd: Assistant Professor Learn... Google Scholar Settings

Convert Select

google scholar Go Find Software

### Scholar Settings

Save Cancel

**Search results**

Languages

Library links

### Collections

☒ Search articles (☒ include patents).

☐ Search case law.

### Results per page

10 Google's default (10 results) provides the fastest results.

### Where results open

☐ Open each selected re

### Bibliography manager

☒ Don't show any citation import links.

☐ Show links to import citations into BibTeX

Save Can

Select your "import citations" format

